

COMMERCE

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Can Strikes Be Prevented?

Pitfalls That Kill The Small Company .

Built By Tilt-Up

Research Magic At The Stockyards . .

Special Report

Chicago At Work In 1949

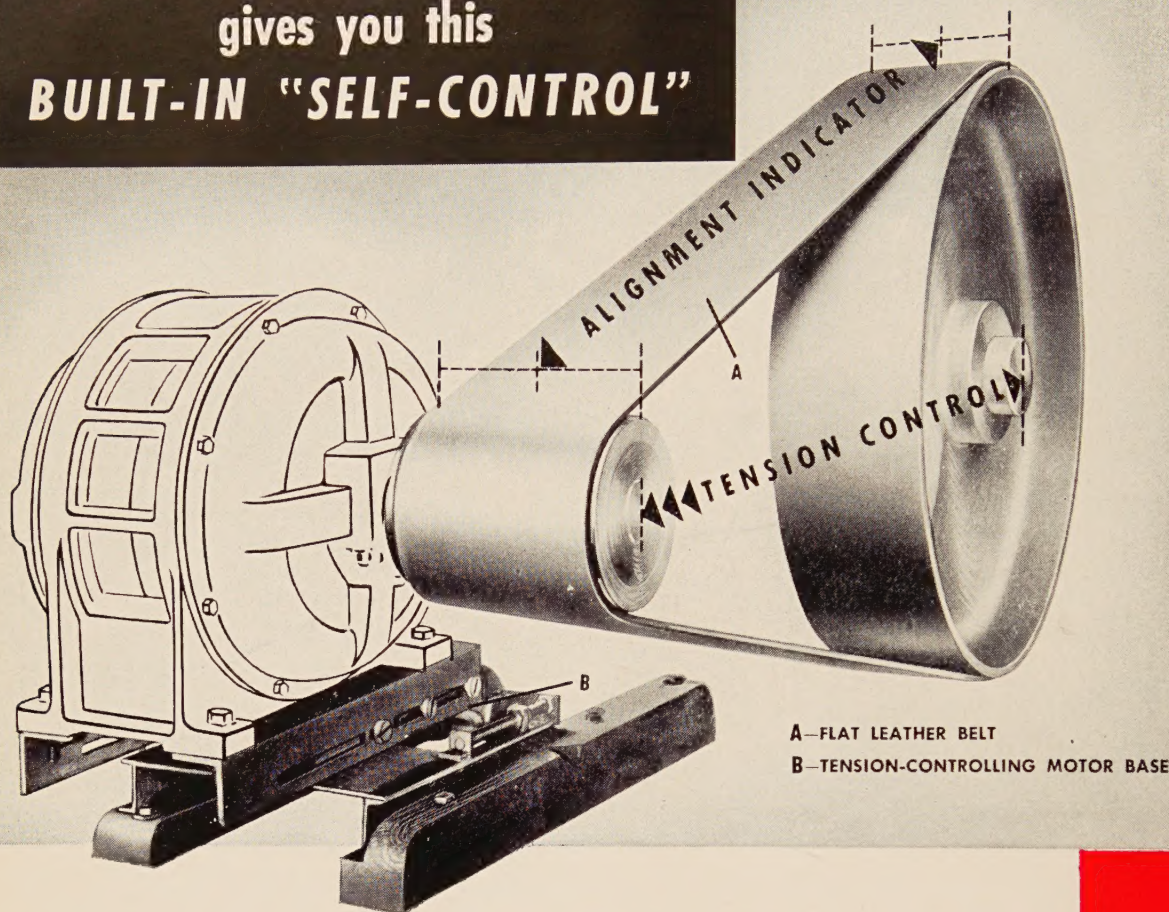
MARCH, 1950

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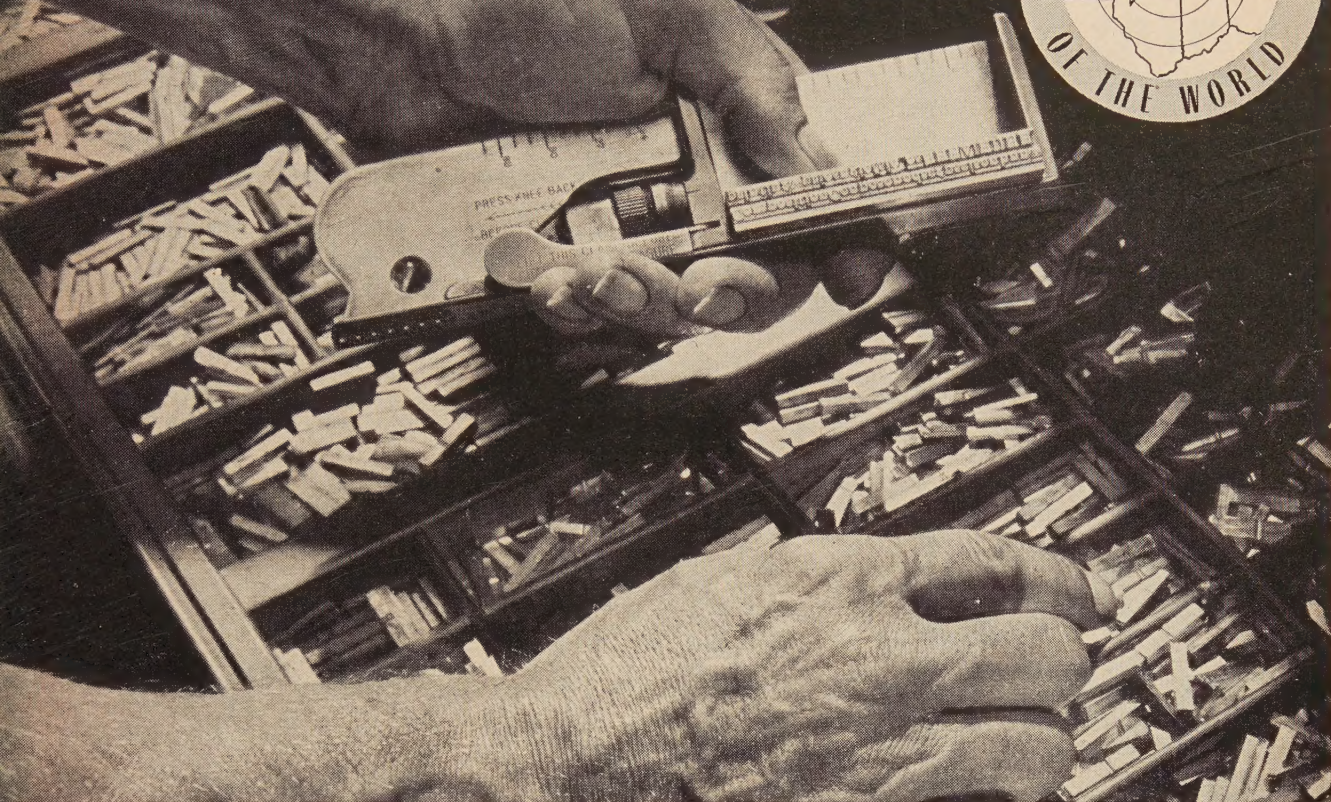
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Chicago area's leadership in the printing industry—ones which mean advantages for *your* business, too.

Chief among them is the area's central location, coupled with its unequalled diversified transportation facilities. Distribution to every part of the country, so essential to printing and publishing, is quick and economical. Raw materials and equipment, too, are readily available. The printing industry in Chicago and Northern Illinois enjoys additional advantages—a large skilled labor market and a growing stability in labor-management relations which assures continued dependability of production.

For information concerning how *your* business can benefit from locating in the Chicago-Northern Illinois industrial area, write or telephone us, and we will be glad to prepare for you a confidential survey of the specific benefits your enterprise can enjoy here. We will give prompt attention to your requests for information. There is no charge for this service.

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STATISTICS OF CHICAGO BUSINESS

	January, 1950	December, 1949	January 1949
Building permits	471	525	33
Cost	\$15,810,000	\$10,846,400	\$6,600,44
Contracts awarded on building projects, Cook Co.	907	1,157	5
Cost	\$21,669,000	\$32,176,000	\$19,034,00
(F. W. Dodge Corp.)			
Real estate transfers	5,270	5,219	4,11
Consideration	\$4,507,762	\$7,884,849	\$4,086,99
Retailers' Occupation Tax collection, Cook Co.	\$9,638,175	\$7,656,404	\$10,030,11
Department store sales index	189.0 ¹	368.1	196
(Federal Reserve Board)			
(Daily average 1935-39=100)			
Bank clearings	\$3,203,281,069	\$3,174,734,931	\$3,122,801,00
Bank debits to individual accounts:			
7th Federal Reserve District	\$15,818,939,000	\$16,375,226,000	\$16,055,986,00
Chicago only	\$8,164,420,000	\$8,612,004,000	\$8,282,638,00
(Federal Reserve Board)			
Midwest Stock Exchange transactions:			
Number of shares traded	1,411,000	1,299,000	542,00
Market value of shares traded	\$35,825,737	\$32,323,710	\$16,304,00
Railway express shipments, Chicago area	1,061,056	1,572,437	1,345,55
Air express shipments, Chicago area	55,050	66,827	46,56
L.C.L. merchandise cars	20,158	19,513	22,77
Electric power production, kwh.	1,137,294,000	1,134,613,000	1,101,222,00
Revenue passengers carried by Chicago Transit Authority lines:			
Surface Division	55,541,922	57,593,341	65,099,76
Rapid Transit Division	12,766,803	13,441,654	14,674,22
Postal receipts	\$8,542,109	\$12,798,559	\$8,484,83
Air passengers:			
Arrivals	91,334	90,914	72,90
Departures	98,882	96,601	80,43
Consumers' Price Index (1935-39=100) ..	172.3	173.2	174
Livestock slaughtered under federal inspection	621,802	693,138	637,55
Families on relief rolls:			
Cook County	30,379	30,302	21,04
Other Illinois counties	23,710	21,867	17,72

¹ Preliminary figures.

APRIL, 1950, TAX CALENDAR

Date Due	Tax	Returnable to
15	If total O.A.B. taxes (employer and employee) plus income tax withheld in previous month exceeds \$100, pay amount to or remittance may be made at the end of month with quarterly return directly to	Authorized Depositary Collector of Internal Revenue
15	Illinois Retailers' Occupation Tax returns and payment for month of March	Director of Revenue
30	Illinois Unemployment Compensation contribution report and payment for first quarter of 1950 (UC-3 and UC-40)	Director, Dept. of Labor
30	Quarterly return and payment (by depositary receipts or cash) of income and O.A.B. taxes withheld by employers for first quarter of 1950, (Form 941)	Collector of Internal Revenue
30	Second quarterly installment on 1949 Federal Unemployment Compensation Tax	Collector of Internal Revenue
30	Federal Excise Tax return and payment due for March, 1950	Collector of Internal Revenue

COMMERCE

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In This Issue . . .

This is the largest issue of COMMERCE MAGAZINE in more than 20 years — the biggest, in fact, since December 7, 1929, when COMMERCE, then a weekly, published a 392-page, 25th anniversary issue.

Its exceptional girth is largely due to the 75-page Special Report on business activity in the Chicago area during 1949. It would be hard to guess how many man-hours of reporting, writing and editing have gone into this 22,000-word review. The gathering of statistics has by no means been the smallest part of the job. In most lines of industry, it is a relatively simple task to obtain figures covering production, employment and the like on a national scale. It is often a very difficult task to obtain similar figures at the local level. Nevertheless, readers will find supporting statistics in each of the review sections.

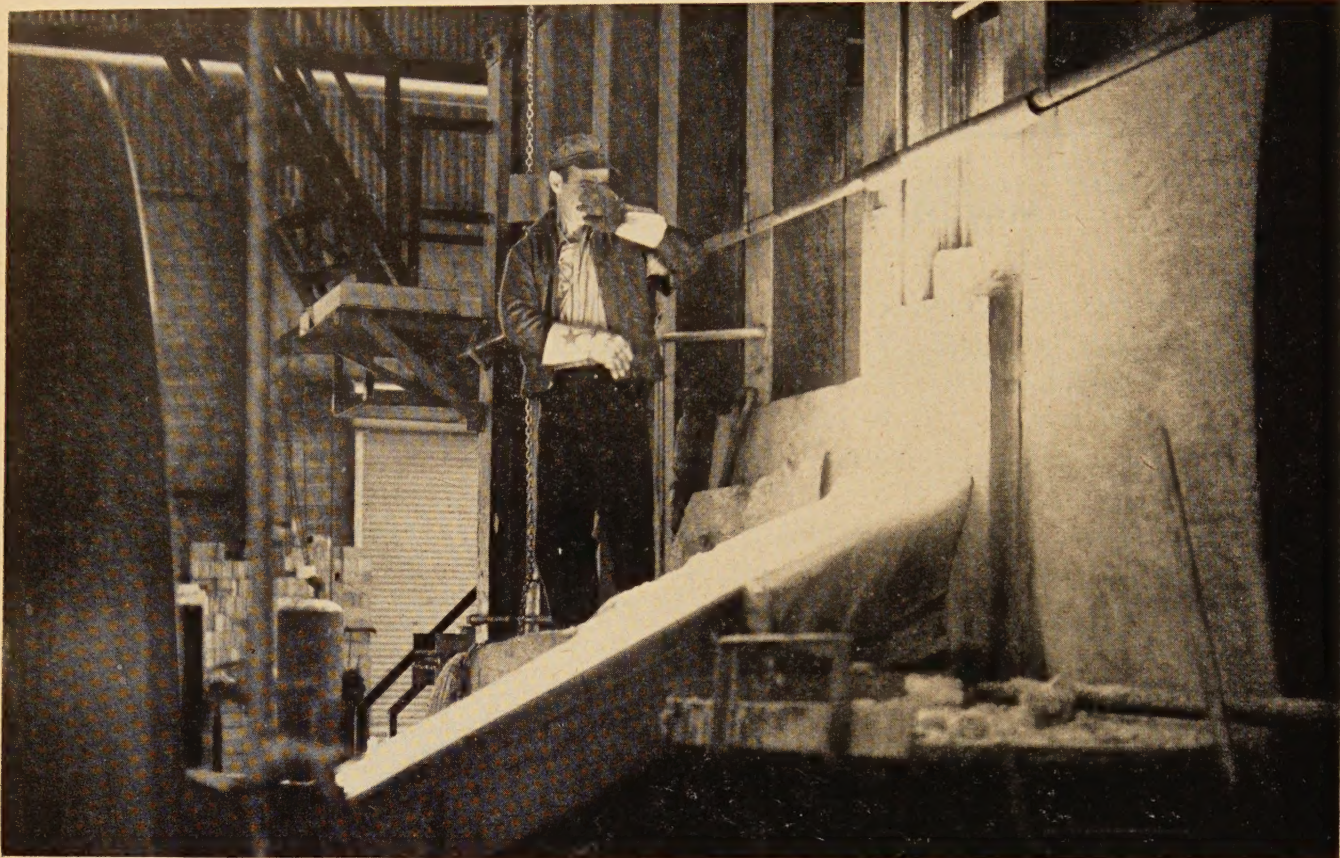
Several regular contributors to COMMERCE have assisted in preparing this review issue, notably Betty Savesky, who among other editorial chores covered the oil, printing-publishing and radio-television industries, and Daniel F. Nicholson, who covered banking and the Midwest Stock Exchange.

Leading the regular section of the magazine, Management Engineer Herbert J. Allemang's article "Can Strikes Be Prevented?" (p. 15) emphasizes the value of job evaluations and time studies. Joseph K. Wexman, whose article (p. 17) reviews the chief causes of failures among small companies, is director of the Management Seminar for Smaller Business at the University of Chicago and also president of Phoenix Finance Company. John A. McWethy, Chicago Bureau Manager of the Wall Street Journal, reviews the far-reaching research work of the meatpacking industry beginning on page 25. A new method of concrete wall construction, that saves labor and materials costs, is described on page 22 under the title "Built By Tilt-Up!" Washington correspondent Jack Robins reports (p. 30) upon a battle that appears to be shaping up to determine which federal agency will have authority to "control monopolies."

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THE USE OF *GAS* IN BUSINESS

NO. 16 OF A SERIES



An impressive scene at the Chicago plant of the Diamond Alkali Company, as operator opens up plug hole permitting white hot sodium silicate to flow from huge gas-fired furnaces into a large rotary solution drum where it is immediately shattered into fragments by cold streams of water.

ONE of the largest and most modern gas-fired regenerative furnaces in industry is located in the Chicago plant of the Diamond Alkali Company. It is used in the manufacture of sodium silicate, commonly called water glass.

Sodium silicate is one of man's busiest chemicals and is used in the production of soap and bottles, making synthetic catalyst for refinery cat-cracking, impregnating wood, rendering bricks and cements non-porous, and as an adhesive in corrugated box making. Gas is used to maintain complete automatic temperature control necessary in the processing of the product.

THE PEOPLES GAS LIGHT AND COKE COMPANY

The Editor's Page

Self-Help — Maine Style

A GROUP of business men and bankers in Maine are launching an experiment in regional self-help that may show the way to take the steam out of the developing drive in Washington to expand federal aid to business.

In Maine, a corporation has been organized to make venture loans to new businesses and small businesses wanting to expand which are unable to obtain such credit from commercial banks. Local industries have subscribed sufficient capital for the development corporation to enable it to obtain maximum credit from banks, insurance companies and building and loan associations of \$1,500,000. The state bank examiner has approved the plan, and his office will examine and supervise the corporation, which is headed by Arthur F. Maxwell, president of the Maine Bankers Association. Loan applications, after screening by the development corporation's staff, will be submitted to local advisory groups and then to the corporation's board for final decision.

The whole venture is an operation of private capital under private management seeking to meet a recognized need. It is still too new to know how the plan will fare in operation. Its organizers are to be congratulated, however, on their initiative and determination to meet a problem on a local basis with local private capital.

Collective Bargaining vs. Monopoly

AS THIS is written, the country is gradually being paralyzed by a strike of the United Mine Workers. In the less than five years since the end of the war, the same thing happened twice before. Despite the misery, inconvenience and incalculable financial loss that is being inflicted, however, there seems to be little recognition of the basic problem and less demand that it be corrected. The UMW, of course, is doing nothing more than demonstrating the power of unregulated monopoly. By specific exemption from the anti-trust laws, the UMW, or any union, admittedly has a legal right to such power.

This is where the fault lies. By some strange process of reasoning, the right to bargain collectively has become confused with the right to create and exercise absolute monopoly. Control over all the workers in an industry is identical with control over all the production facilities, all the sources of raw material, or the prices of all the units in an industry. This has been proved conclusively several times in the coal industry and in the steel industry as well.

Only when the majority of the voters in the country awaken to the fact that fully as much harm can be done by a labor monopoly as by any other kind can the present intolerable situation be corrected.

The cure lies in restricting collective bargaining so that the employees of any single employer may organize and have all the other rights presently accorded them except the right to join in a national organization which attempts to set the price and working conditions for all workers in a whole industry. Unions so organized would still have enormous bargaining power. An individual employer could hardly be subjected to greater pressure than to have his production stopped while the production of competitors was allowed to continue.

Until the right to stop production in whole industries is taken away from national unions, national catastrophes such as the current one created by the UMW can be expected to recur. It is futile to allow monopoly power legally to exist and then say that when it is used to create a national emergency — such as we have today — the President under the Taft Hartley Act or some other statute should temporarily end the emergency by suspending the power. No agency, whether it be under the control of workers, businessmen, farmers or any other group of citizens, should be legally able to create a national emergency. To attempt to deal with this situation other than by eliminating the root cause is only temporizing. In the vernacular, "we are kidding ourselves." The country will not be free of the constant threat of economic paralysis until nationwide strikes are outlawed.

Progress for Midwest Exchange

THE new Midwest Stock Exchange, which has been showing even better progress than its sponsors hoped for when it commenced operation three months ago, has received some valuable assists from leading corporations which have recently appointed transfer agents and registrars in Chicago. Previously, these companies made transfer and registrar service available only in New York, although their securities were traded on the Midwest Exchange as well as in New York. This obviated two of the big advantages of executing orders on the local exchange. It meant that the New York state transfer tax of \$4 per hundred shares had to be paid and from ten days to three weeks of time lost in making transfers.

The movement to make it possible for Midwestern stockholders to realize these advantages in dually listed stocks, which has been given impetus by such companies as United Air Lines, Sinclair Oil and Acme Steel Company, is highly constructive. The Midwest market, the Chicago financial district and stockholders all benefit at slight cost to the corporations. It is to be hoped that the trend will continue until all of the 110 companies with securities listed here, as well as in New York, provide Chicago transfer and registrar facilities.

Alan Sturdy

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HERE-THERE and EVERYWHERE

• **Venezuelan Iron** — The mountain range of iron ore discovered by United States Steel Corporation in Venezuela in 1948 is not only vast in extent but has an iron content higher than that found in the Mesabi range in Minnesota. This was disclosed by John G. Munson, vice president of U. S. Steel, at a hearing before the Joint Committee on the Economic Report. The problem with the Venezuelan ore, Munson said, is how to develop the property and what methods to use in bringing the ore from the interior to a shipping port. Meanwhile, U. S. Steel continues to experiment with recovering iron from plentiful taconite, a hard rock with a low iron content.

• **High-Speed Tools** — Machine tools that can be operated at speeds more than 20 times faster than sound and with moving parts that can operate for years without wearing out are about to emerge from the laboratory, says W. W. Goehring, senior anti-friction bearing engineer of SKF Industries, Inc., Philadelphia. Goehring credits stronger and more versatile metals, precision ball and roller bearings, and improved lubricants, with making supersonic speeds possible. The high speeds in machine tools will in turn make possible a more efficient grinding of metal parts, thereby producing finer surface finishes. More accurate ball and roller bearings, for example, will enable machines to be more accurate, to be more quiet in operation, and to last much longer.

• **Dutch Television** — Holland plans to erect a television transmitter this year at a spot between Amsterdam and Utrecht. For two years the transmissions will be largely experimental, and after that Holland expects to have 30,000 tele-

viewers, the U. S. Department of Commerce reports.

• **Canned Live Lobsters** — New additions to the growing list of canned items are live lobsters, whale steaks, and frozen lemonade. American Can Company stated. Another potential field is the canning of explosives, electrical instruments, and drills, the company says.

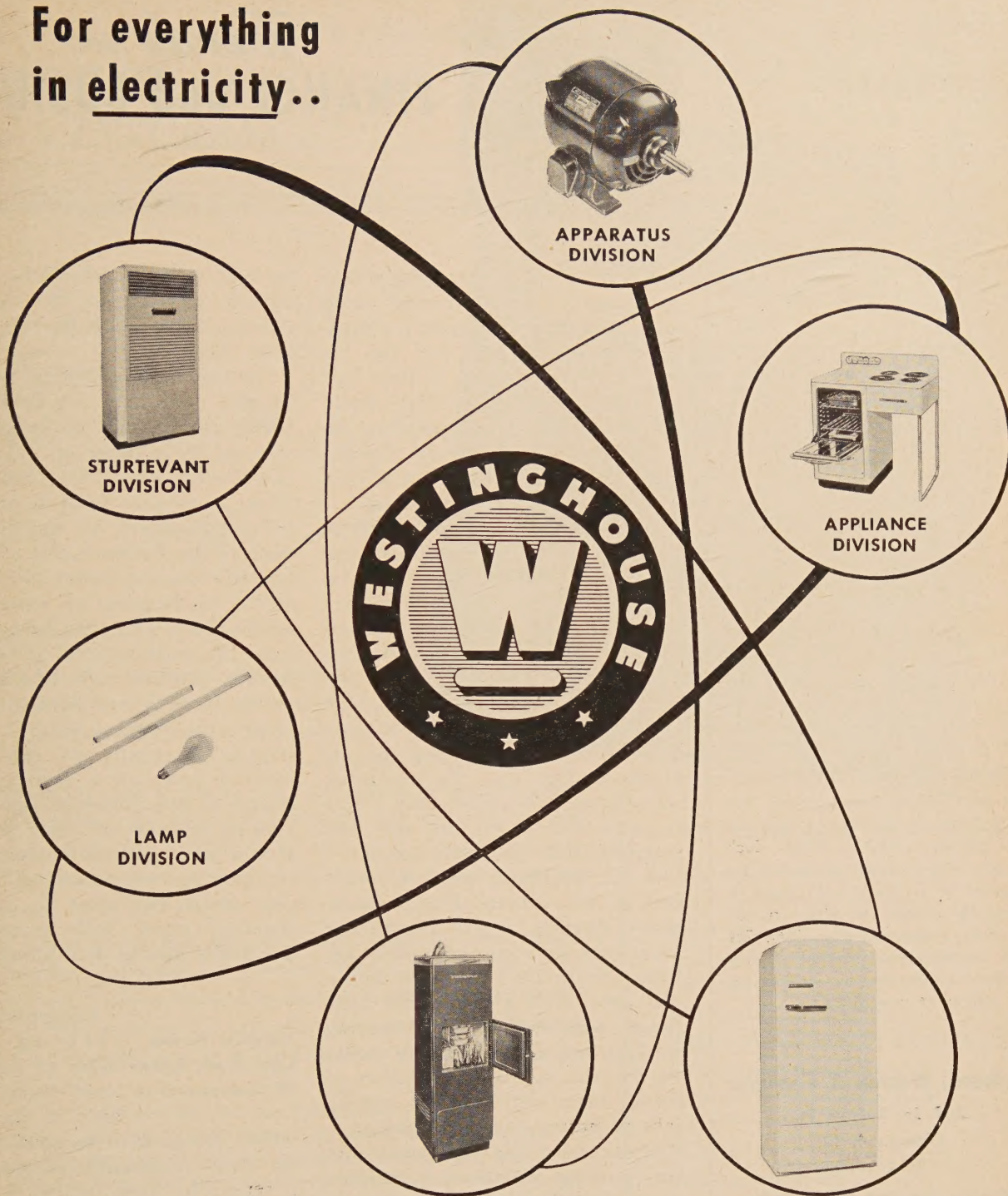
• **Illinois Auto Taxes** — Motorists and truck operators in Illinois get off relatively lightly in the matter of taxes. Illinois rates 39th among all states in the total amount of taxes levied on medium-sized passenger automobiles, and ranks 45th in taxes on heavy trucks used in intrastate commerce. Griefenhagen & Associates, consultants who compiled these statistics, report that southern states in general levy higher total taxes on motor vehicles than other states, while eastern and midwestern states show the lowest totals.

• **Stepping-Stone X-Ray** — A new "stepping-stone" line of x-ray equipment developed by General Electric X-Ray Corporation can be arranged into more than 300 different types and models of x-ray machines. With this new product known as the Maxicon, the company says it will be possible for even the smallest hospital, industrial medical department, or clinic to utilize x-ray. The trick is that a simple basic unit can be purchased first, and additional features or equipment purchased as the patient load grows and finances permit. The possible combinations make up a total of 304 different types and models of x-ray machines.

• **Tax Sources** — Nearly half of the states depended upon sales, use

(Continued on page 114)

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Trends in FINANCE and BUSINESS

Retirement Made Easier For Workers

Realizing that emotional readjustment is a problem for the retired worker just as is the need for adequate financial resources, some operating departments of the General Electric Company have worked out a plan to ease the emotional problems.

Under the plan, personnel managers and supervisors interview each worker five years before his retirement, to help him work out any personal problems. Frequent meetings are held within the two years immediately preceding actual retirement. After retirement, the pensioner receives a visit one month, six months, and a year after he has left the company. Thereafter he is visited once a year to help him work out any new problems that may have arisen.

A. D. Marshall, assistant secretary of the General Electric Company, recently urged compulsory retirement at a predetermined age from the pressure of most industrial jobs. This promotes the emotional well-being of the retiring workers and makes room in industry for the increasing numbers of young men who will be seeking jobs in future years, Marshall said. The increased life expectancy and the growing number of children approaching working age has posed the problem of finding jobs for all, even in an expanding economy.

A Peek At The Grocery Store Of The Future

Such marvels as frozen foods, ready mixes, detergents, dehydrated foods, and improved freshness control methods, now commonplace in the corner grocery store, are the forerunners of many other new products and services. At least that is the forecast of food

brokers who attended the recent annual meeting of the National Association of Food Brokers at Atlantic City, N. J.

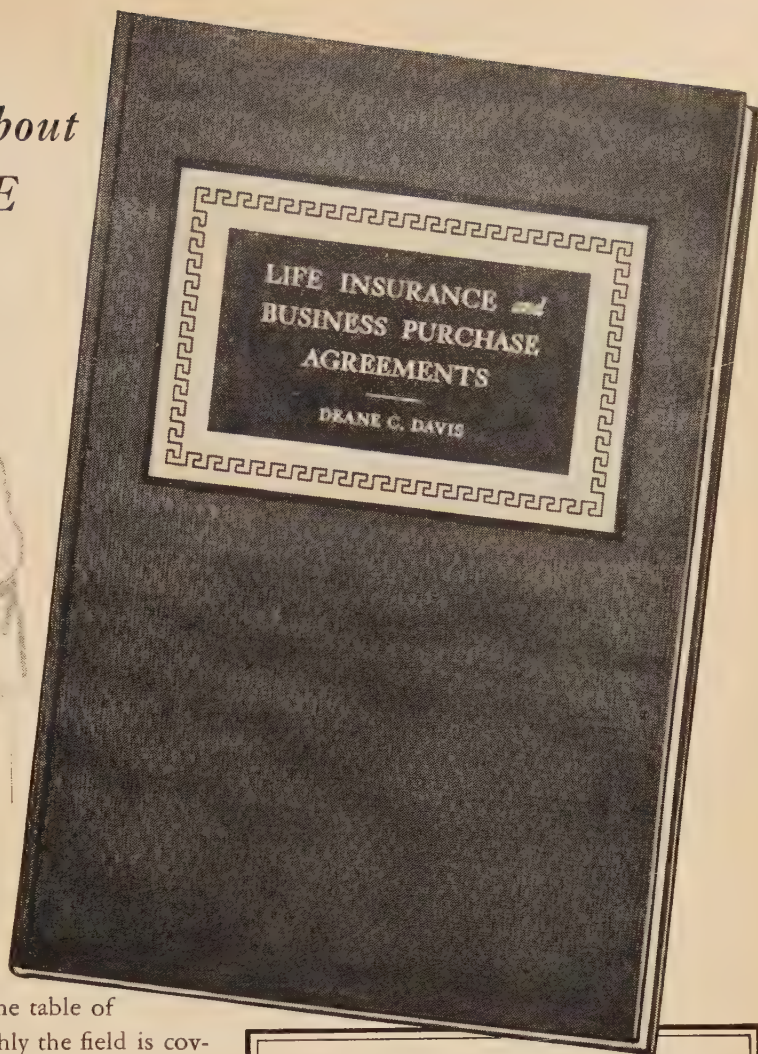
Among the possibilities visualized by the food men are meals prepared by the chefs of Europe and sold on the counter of the American grocery store. Also exotic foods from the tropics, flown by jet plane to neighborhood so quickly that none of the freshness and taste will be lost. Soup-to-dessert meals, prepared by freezing or some other method, will some day be available from the neighborhood grocer, and he will probably sell beverages in edible "bottles" and foods in edible "cans," the brokers believe. Other possible developments that seem fanciful now are a laundry compound to dry clothes as they rinse, making hanging of them unnecessary; a foil in which to wrap meat for cooking, and which will evaporate when the roast is done; a chemical which will cleanse and dry dishes merely by dipping them

« « » »

Equipment for talking over a beam of light has now been developed to the point where reception is as good as that on most telephones, according to a report by Prof. Walter S. Husar and Prof. Wallace R. Wilson of Northwestern University's department of physics where research in light-beam communication has been going on since 1941.

Both the Germans and the Japanese developed light-beam systems during World War II, but their units lacked the versatility of those developed at Northwestern. The new system has a wide beam angle so that the transmitter need not be pointed directly at the receiver. This makes the light beam useful

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The author is Vice President and General Counsel of the National Life Insurance Company and a widely recognized authority on his chosen topic. Insistent demand for this work soon exhausted the first printing. This is the second edition, brought up to date with recent rulings and cases in point, as well as considerable matter not included in the original.

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ABBREVIATED TABLE OF CONTENTS

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The Wife as Beneficiary
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Other Suggested Forms



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for ship to ship, airplane to ground, and airplane to airplane communication. A portable unit has been developed for field use.

The big advantage of light-beam communication is the security it offers from enemy detection, since the beam is directed at the receiver instead of being broadcast in all directions like a radio wave. Thus, coding of messages is unnecessary, and there is no need for separate channels to prevent jamming. The range of the light beam, however, is limited by the curvature of the earth.

Essentially the system is made up of a transmitter and a receiver, which are combined into a single unit called a transceiver. The light intensity from the transmitter is varied according to the frequency of the voice. The light beam falls on a light-sensitive receiver at a distance, the signals are intensified, and the fluctuations are then converted back into voice signals over a public address system or on telephone head sets.

Much of the range, power, and design details are still classified as secret by the Department of Defense and the U. S. Navy.

« « » »

Better working
Installation Cost arrangements made
For Electric Ranges by appliance deal-
Cut Again in 1949 ers with their local
electricians have
resulted in a lowering of the average cost of installing electric ranges to \$35 in 1949 from \$41 in 1948 and \$49 in 1947, according to a Hotpoint, Inc., survey of more than 8,000 range purchases in 1949.

The survey brought out other significant facts. One is that the large market for the electric range is definitely in the medium income groups. Two-thirds of the purchasers covered by the survey valued their homes at \$10,000 or under.

Electric utility companies are lending their help in merchandising electric ranges since the latter are regarded as one of the most important load-building appliances. The utility industry is nearing completion of a \$9,000,000,000 expansion program to increase generating capacity by 50 per cent over the 1945 peak of 50,000,000 kilowatts, and the completion of this program will enable them to encourage the purchase of electric ranges. A Bos-

ton utility company that offered free installation in a newspaper advertising campaign was called upon to install more than 6,000 ranges. Hotpoint reported.

Other favorable factors in the outlook for the electric range, the Hotpoint survey notes, include the wiring of more new homes and apartment buildings for this appliance, and the prospect that electricians, who have had more work than they could handle since the end of the war, will seek range installation jobs when conditions in the building and construction field become more competitive.

« « » »

The Garbage Man Jasper, Ind., population 6,800, may have started
Gives Way to movement that
Robot Disposer will mean the elimination of the garbage man. The town's city council has voted to suspend all municipal garbage collection after August 1 and has accepted a bid to install General Electric garbage disposers in the sinks of all residents. Each individual householder will buy his disposer from the city. The installation will save the town an estimated \$13,000 annually in wages and equipment for garbage collection. Those citizens who do not want disposer installations may get rid of their garbage by incineration or by other methods approved by the Jasper Board of Health. The city will license private firms or individuals to collect garbage.

The new disposal units are to be installed not later than July 31, 1950.

« « » »

New Automotive The new plant
Plants Scattered built by the auto
Over the Nation motive industry since the end of the war, and the additional plants to be built in the future, are being scattered over the country, near, but outside of large cities, Automobile Facts observes. Among the reasons for stressing wide geographical distribution are security in the event of war, the high cost of land in built-up areas and the lack of room for parking employes' cars, savings on freight costs, nearness to regional markets and suppliers, and the availability of labor. Many large cities with an

(Continued on page 115)

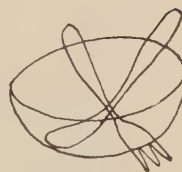
Men's Grill**CARSON****PIRIE****SCOTT & CO****Eighth Floor Monroe****Men...relax in****Carson's "Grill"**

... a masculine sanctuary where you enjoy deli-

cious, inexpensive food served in the courteous

Carson's way. Reserved for men only, except

Saturdays when escorted ladies are invited.





Can Strikes Be Prevented?

By Herbert J. Allemang
Mgr., Stevenson, Jordan & Harrison, Inc.

A Management Consultant Holds That Most Disputes Can
Be Resolved Before They Reach The Picket Line Stage

GOVERNMENT figures show that 63.6 per cent of the strikes in 1948 arose in disputes over wages and hours or over production standards. In other words, they boil down to questions which can be determined by scientific setting of base rates through job evaluation and time studies. Properly conducted, such studies can establish indisputable facts since one cannot, for instance, argue with a stop-watch. If the studies are utilized jointly by management and labor, few bases for disagreement result on these questions when the facts are determined.

Before going into detail, certain facts must be recognized in discussing the highly controversial question of whether or not most strikes can be prevented.

In the first place, any sensible executive recognizes that no answer has been found to certain strike situations. If there is plenty of coal above ground and John L. Lewis decides to pull the miners from the pits, no power on heaven or earth has yet been found to maintain production. If a company and a union simultaneously decide the

time is ripe to invest in a knock-down, drag-out battle for position, there is rarely a peaceful solution.

On the other hand, a superficial survey of newspaper headlines and strike statistics gives no indications of the number of strikes prevented before they reached the picket line stage. The figures and headlines tell only of the disputes which were not prevented. And there are indications that labor and management are learning how to settle disputes without picket lines. For example, the 1937 reports of the U. S. Bureau of Labor Statistics show that with only 8,666,000 production workers employed in manufacturing industry, there were 4,740 work stoppages. In 1949, with 12,717,000 production employees working in manufacturing industries, the strike total was only 3,419, according to BLS.

Strikes Declining

There are many circumstances and variables involved in these figures which so clearly indicate a decreasing number of strikes. It could be argued that 1937 was an abnormal year since it was a very active period of union organizing. Conversely, authorities can argue that 1948 was a period of post-war readjustment, a year in which

union membership was at an all-time high and that in a similar period after World War I strikes reached an all-time high. However, there is little doubt that improved understanding and use of basic time study and job evaluation methods has been one strong factor in the development of better working relationships.

Need Basic Facts

Our experience indicates that a majority of strikes over wages and production could be prevented if there were basic agreement on facts.

An example in which scientific fact-finding should have been utilized in the first place by management and labor was the Ford strike a little less than a year ago. The CIO United Automobile Workers union charged speed-up. The company denied the charge, and the big strike resulted from this disagreement. It involved 102,000 employees. More than \$20,000,000 were lost in wages alone.

After incurring those staggering losses, the participants settled the dispute by methods which could have been employed in the first place, namely, by management-union participation in establishing the facts and in settling of time study standard grievances.

Acme photo

“A majority of strikes over wages and production could be prevented if there were basic agreement on facts”

Another example was the Bendix strike. Here again the major dispute was over the question of whether there was or was not a speed-up beyond that rate of production upon which wage schedules were based. The other cause was a dispute over wage rates in the brake shoe department. In this case 7,500 employes were on strike 71 days. The strike was finally halted by agreement to renew fact-finding and negotiations.

Roots Of Trouble

These are only two of many examples indicating that the disruptive "misunderstanding and lack of mutual confidence" arises from ignorance of the basic facts which can and should be determined by applying engineering precision to the task of tracing down the roots of a dispute.

Only a few years ago the idea of joint labor-management studies to establish job classifications and base rates, and the idea of union time study experts checking the time studies were considered revolutionary. Today, this method is gaining acceptance rapidly in all major industries. The steel industry has made joint job evaluation virtually a standard practice. More and more companies in other industries are adopting the idea.

The simple adoption of joint labor-management studies, of course,



Herbert J. Allemang

is not in itself a guarantee of success. Like any other idea, success or failure is measured by the quality of the system and the way in which it is used.

Joint Committee Work

There are various methods and systems for joint management-union use of such studies. We use a committee system for evaluating jobs and many companies follow the same outlines. First, a plant-wide committee is created made up of one management member, one union or employee member, and one outside engineer. Two rotating members are included in moving

from department to department. In each department a representative of management (usually the foreman) and the union (usually the steward) are added as the two rotating members. In a non-union shop an employee representative is chosen, there being no shop steward.

Training School

The committee members "go through school," that is, they are thoroughly trained in the job evaluation methods to be used. They interrupt the lectures and demonstrations with questions. They argue with the teaching engineers and with each other. Eventually, they emerge with a full understanding of the methods to be employed in determining the value of each type of job performed in the factory.

Together, the committee members study each job — frequently with the help of the operators. They write a job description which provides the basis for setting values. To understand this initial step, let's take a typical job description covering the duties of a single spindle drill press operator.

The description finally agreed upon, after considering all data obtained by committee members and after studying the descriptions written by the operators themselves is this:

"Picks up material by hand and places it on work table. Operates single spindle hand feed drill press, performing drilling and/or tapping operations on small piece parts. Visually spot checks finished work. Does no set-up, adjustment, or sharpening of tools. Keeps record of part number and production count. Handles parts weighing up to three pounds. Uses no special tools or equipment. Works in sitting position. Uses jigs and fixtures. No layout of work. Operates from verbal instructions from foreman and simple blueprints. Working conditions good. Only minor hazards present."

Once this description is agreed upon, there is little room for argument on the facts involved on rating various factors which — taken together — eventually determine the classification of the job and the base pay.

OCCUPATION EVALUATION SUMMARY SHEET

Dept. <u>Mechanical</u>		Labor Rate _____					Date <u>July 16, 1948</u>												
Analysis by <u>Bissell</u>		Management Committee					Union Committee												
No.	OCCUPATION	SKILL, DEXTERITY, ABILITY, ETC.		VERSATILITY		JOB KNOWLEDGE		RESPONSIBILITY		PHYSICAL DEMAND		SURROUNDING CONDITIONS		TOTAL INDEX		RATING FACTOR		BASE RATE	
		GEN'L. SCHOOLING	TRAINING PERIOD																
300	Automotive Mechanic	70	120	75	50	90	100	30		15	550	1.56							
301	Blacksmith - "A"	70	140	90	50	90	100	30		15	585	1.64							
302	Blacksmith - "B"	40	100	60	30	60	75	40		15	420	1.33							
303	Carpenter - "A"	70	140	90	50	75	100	40		20	590	1.65							
304	Carpenter - "B"	40	100	60	40	60	50	40		20	410	1.31							
305	Diesel Mechanic - "A"	70	140	90	60	90	125	40		20	635	1.76							

A sample "occupation evaluation" worksheet used by some companies

(Continued on page 140)



Business failures, especially among small companies, are rising sharply

Korth photo

Pitfalls That Kill The Small Company

By JOSEPH K. WEXMAN

Dir., Management Seminar For Smaller
Business, University of Chicago

DURING the past few years business has enjoyed a period of exceptional prosperity with employment, purchasing power and consumer demand all at high levels. Despite these favorable conditions, almost 15,000 business enterprises have failed during the past two years and the mortality rate continues to climb at alarming speed. The key to this paradox can be stated simply: no matter how good general business conditions may be, the success or failure of an

individual concern depends to a large degree upon the skill of the individual management.

To many able businessmen, this fact may be so obvious that it seems needless to state it. Yet the statistics would indicate that a number of small businessmen have been lulled into the dangerous assumption that good business conditions assure prosperity for every concern.

Experience at the Management Seminar for Smaller Business at the University of Chicago has led

to one more conclusion; today's business failures are due in the great majority of cases to haphazard, careless operation. Many firms which fail were not the most inefficient producers by any means; their major crime was that they operated in hit-or-miss fashion. When business activity lagged a bit, they felt the pinch earliest and succumbed fastest.

Planning Essential

On the other hand, more than 85 per cent of the most successful smaller firms owe their prosperity to skillful planning. In the main, this planning involves four elements: (1) a sales forecast, (2) a budget, (3) controlled inventory, and (4) proper organization of a selling program.

In most successful companies, the sales forecast is usually made item by item for a year, or at least for as long a period as can be reasonably foreseen. Forecasting the sale of seasonal lines is difficult, but the relative security that successful managers enjoy comes from having made an accurate sales forecast. Having learned where the seasonal peak occurs, they don't get excited before the peak and think they have too much merchandise. Also, they don't wait until the peak, then think their sales are going to continue, re-order and then get stuck with surplus inventory.

Such errors are avoided because these managers have taken last year's figures, adjusted them for probable changes and then formulated a fairly accurate idea of what sales should be, at what time, and in what item or price line. On this basis inventory is built. It isn't ideal if a few sales are lost because of insufficient inventory, but it is a lot better than having an uncertain inventory position or an overhanging surplus.

A sales forecast also provides a sound basis for calculating labor force, material requirements and the timing for each element. One company president regularly makes yearly sales forecasts and revises

them quarterly. In the light of this information, he knows very closely how large a force he needs in the factory every quarter; he knows almost exactly what raw materials are required; and he knows when he needs men or materials so that production will be expedited and his stockroom will be neither long nor short.

The absence of sales forecast usually results in singularly bad timing—hurried recruiting of inefficient labor with costly turnover, plus higher prices for materials ordered in uneconomical quantities at the last minute.

Examples of such bad timing are plentiful: a retailer belatedly scrambling for Christmas toy inventory, paying outrageous prices at the last minute and then finding he cannot store the tremendous order. When the final rush comes, boxes are opened willy-nilly by salespeople, toys are broken and crushed, sales are lost and breakage is enormous.

The Sales Forecast

In another case, a wholesaler of musical instruments who had entered business during the war assumed that wholesaling was merely a matter of allocating scarce merchandise to dealers. He made no attempt to forecast sales, plan inventory, labor or sales force requirements. When manufacturers began shipping full orders instead of partially filling orders, this wholesaler found himself with insufficient storage, insufficient labor to handle the flow and too few salesmen to call on dealers who were getting all they wanted from other wholesalers. By the time this wholesaler had recruited, and trained salesmen, dealers had stocked up for the season's needs, and he was left with a back-breaking inventory.

The sales forecast leads to a dollar budget. No one can possibly estimate sales, labor force and materials requirements without simultaneously determining the amount of money needed to finance such items. Many small businesses run into trouble with the budget. They ignore long-range, seasonal or quarterly budgets and merely pay last month's bills with this month's income. But as income drops off they find they cannot pay their bills un-

til they liquidate their receivables or inventory. They run out of cash because they do not budget resources or anticipate changing conditions.

Money Shortages?

The result often is that such firms think they need more funds and start for the bank or finance company. However, shortage of money is very often a symptom of trouble and not the cause. Many unsuccessful businessmen assume that additional borrowing will cure whatever trouble is present. Actually, a critical examination of the entire operating program of such a business often reveals the trouble to be managerial ineffectiveness. Receivables or inventory may be excessive in relation to sales; the lines may be unpopular or unprofitable; overhead may contain avoidable expenses; variable costs may be too high; or insufficient or misdirected selling effort may be responsible for reduced sales.

When a bank or finance company grants a loan under such circumstances, trouble usually reappears within a few months, unless the root of the difficulty has been corrected. A budget, planned for a year, six months or three months—to coincide with the sales forecast—can avoid many of these difficulties.

Proper inventory control is of equal importance. Where sales forecasts are made, labor and material requirements estimated, and a dollar budget maintained, inventory is no great problem. Yet, more businesses have been washed

out by improper inventories than by any other single shortcoming.

The businessman who knows his sales, labor and materials outlook within reasonable limits, does not load himself with unmanageable inventories. In contrast, however, is the manager whose major impetus is hope, who stocks poorly and then is caught with both surplus and shortages in varying individual items. Some businessmen have seen their companies fail because they tried to make a killing on inventory by gambling on a rise in prices. (The average company has no business speculating with inventories, for the gamble is a risky one.)

The businessman who knows how much he is likely to sell, knows pretty closely how much inventory he needs. If he carries a normal inventory, he buys and sells in the same market. If raw materials rise, his finished prices rise. If raw materials drop, his finished prices drop. The gain or loss either way is slight and he does not risk his business life.

Inventory Central

Of late, cooperative practices have been developed for holding inventories to a minimum. Dealers in the same business but not necessarily in the same part of the city or even in the same city, have begun pooling their inventories at a central point. Non-competitive dealers have thus been able to hold down individual inventories. By cooperation, independent furniture dealers, especially the larger ones, have also secured the advantages of centralized purchasing.

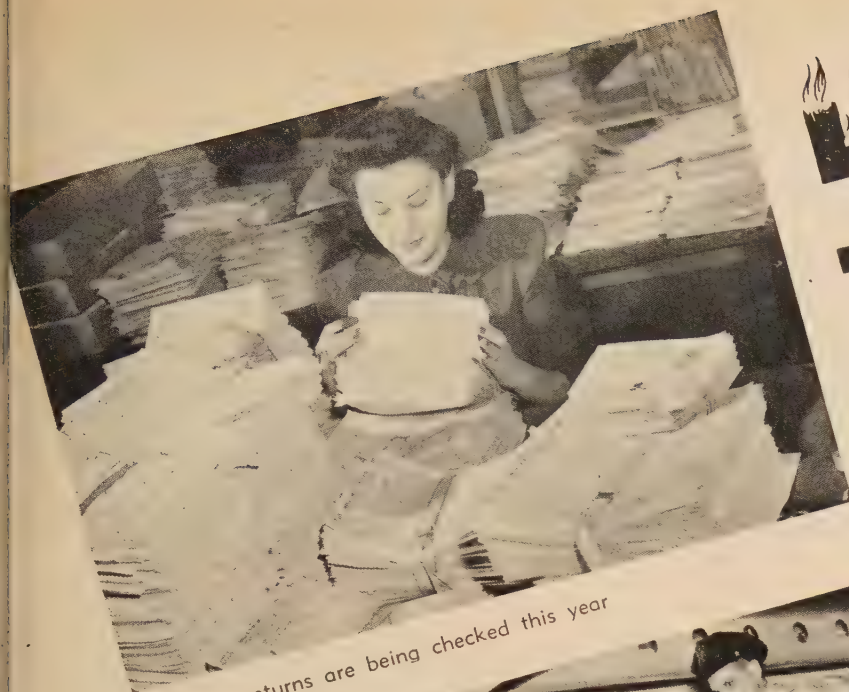
Sound inventory control has proved valuable in still another way—as a safeguard against embezzlement. Recently, a Chicago liquor wholesaler was able to trace down a number of employees who allegedly had been consuming two fifths of whisky a day, six days a week, for two years. He and two other workers were exposed after the company had discovered it was losing—without explanation—\$10,000 a year on its inventory.

A candy plant in Minneapolis and a men's shirt manufacturer in Cleveland discovered embezzlers in similar fashion.

(Continued on page 137)



Joseph K. Wexman



More tax returns are being checked this year

HOT Tax Money!



Revenue agents probe gambling operations closely

FIVE billion dollars is a conservative estimate of what is now owed to the government in evaded taxes. The actual total may be closer to eight billion dollars.

Nothing approaching this sum probably will ever be recovered by the government. If it were, there would be enough for a 20 per cent tax reduction for all the taxpayers of the country for one year!

Although undermanned, the Treasury Department, which includes the U. S. Bureau of Internal Revenue, is doing an intensive job of collecting evaded income taxes. Treasury men realize that the vast majority of our citizens are honest in their dealings with the government.

But they know, too, that the temptation to keep it all is too great for some individuals; a steady procession of cases into the federal courts is demonstrating that cheating on income taxes doesn't pay.

With typical American sportsmanship, the Bureau of Internal Revenue treats the person who has made an honest mistake as a gentleman, and he is allowed to make the correction without recrimination.

The treasury men, in fact, lean

far backward to give the discovered violator every benefit of the doubt, and have a standing offer to waive prosecution of any person who settles up before getting involved in a prolonged investigation.

Recovery Methods

More than a billion dollars has been collected this way in recent years. Additional assessments on all income taxes run about two billion dollars annually.

A number of methods are used to spot the evader. Most extensive efforts are made through audits. Approximately a million cases a year incur additional assessments

because of discrepancies found by government tax auditors.

The large majority of these are small, honest errors, but sometimes it's an evident, intentional case of tax evasion. Sometimes a little item, like an excessive charity donation, gives the initial push to an investigation that uncovers bigger violations.

Naturally, the high incomes all get a careful audit each year. However, with the treasury staff as small as it is, and since there are about 46,000,000 income tax returns filed, it is physically impossible to audit all the lower income returns. Never-

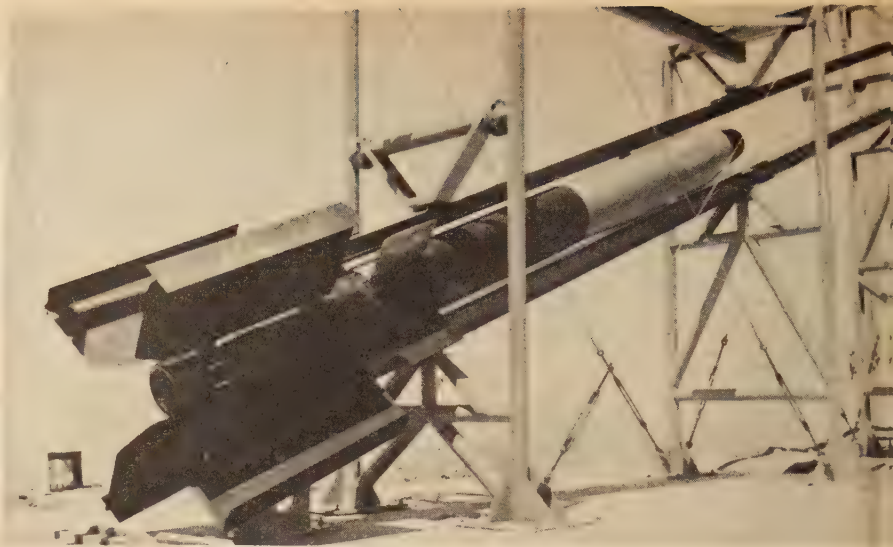
(Continued on page 144)

By PETER B. B. ANDREWS

Government Agents Stalk \$5 Billion In Evaded Taxes



North American Aviation's new "Nativ" guided missile before launching tests



The Navy launched this largest ram jet engine ever flown at Inyokern, Calif.

Rockets: The Comics

Modern rocketry is making the

UNTIL a few years ago, the idea of a passenger-carrying rocket ship — potentially capable of navigating in outer space — was little more than a subject for imaginative fiction writers. But, as has happened before, the fiction writers may have been nearer the truth than they thought. Recent progress in the science of rocketry has actually brought the "space ship" well within the realm of possibility.

Some indication of this scientific progress was given at the American Rocket Society convention in New York recently by Dr. Hsue-Shen Tsien, one of the nation's few authorities on the subject. A rocket liner that could cross the United States in a mere 58 minutes, said Dr. Tsien, is within the grasp of present day technology.

Coast To Coast Flight

The rocket ship would look like a fat pencil. Sharp pointed and about 80 feet long, it would have a nine foot diameter and a pair of small wings located midway along the fuselage. Thirty-seven of its 50-ton launching weight would be fuel load.

In its 3,000 mile flight from

coast to coast, Dr. Tsien envisions the rocket as first following a 1,200 mile elliptical path and then gliding the remaining 1,800 miles. Taking off from New York, it would shoot straight up for one minute reaching the unbelievable speed of 9,140 miles an hour! Though its fuel would now be exhausted, the rocket ship would still be directly over the launching site. Coasting on upward and now westward, it would climb to an altitude of 600 miles above the earth's surface, then slow down to 6,000 M.P.H. and begin its descent somewhere over western Iowa. As it reached the earth's atmosphere again, it would level off at an altitude of 27 miles beginning a long glide to Los Angeles. Finally, the rocket would land at a comfortable 20-degree angle at only 150 miles per hour.

Extraordinary as this may seem today, Dr. Tsien is not inclined to indulge in fanciful prophecy. He is Goddard professor at the Guggenheim Jet Propulsion Center at California Institute of Technology, and one of the world's few scientists to hold the degree of Doctor of Philosophy in Aeronautics.

Between Dr. Tsien's prognostica-

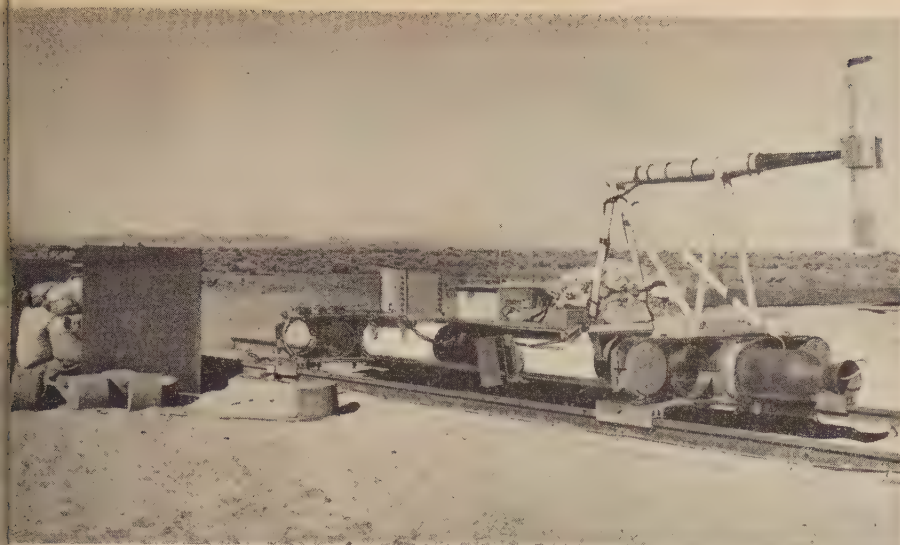
tion and the inception of science of rocketry lies a story that few people have ever taken seriously. But with President Truman's January announcement that the Atomic Energy Commission was working on a so-called hydrogen or H-bomb, the idea of rocket strikes considerably closer home. The H-bomb will, in a fraction of a second, supposedly duplicate the process taking place on the sun: hydrogen will be converted to helium, releasing fantastic amounts of energy.

H-Bomb Use?

If it becomes possible to employ an H-bomb as the warhead in a controlled-flight rocket of the type which Dr. Tsien pictures, it is not difficult to see that cities could be annihilated with pin-point accuracy.

Theoretically, at least, a rocket is simply a carrier, not a weapon. As a guided missile, it could be used to deliver anything from the morning mail to an H-bomb, fresh orange blossoms to a complex machine tool. It could be launched in four different ways to do these jobs:

- (1) from ground to ground targets
- (2) from ground to air targets, (3) from air to air targets or (4) from



Acme photos

This rocket-powered "railway" attained a land speed in excess of 1000 m.p.h.

Foreshadowed Science

wildest fiction seem plausible

By WARREN L. ANDERSON

air to ground targets. All four launching methods have one thing in common: jet propulsion.

Jet propulsion is defined as "a means of locomotion whereby a reaction is imparted to a device by the momentum of ejected matter." A toy balloon illustrates the principle. Blown up and released, the balloon darts across the room in less than a second. It does so because of the force of compressed air pushing against the side of the balloon opposite its neck. Newton explained it with his third "law of motion": for every action there is an equal and opposite reaction.

The idea is not a new one. Hero, the Alexandrian mathematician, capitalized on it 2,000 years ago when he recognized the power in a jet of steam and designed a simple jet engine. The Chinese had an "arrow of flying fire" as early as 1232. A packet of incendiary powder tied to an arrow, the missile was able to fly by itself when the charge was ignited.

Professor Robert H. Goddard is acknowledged as the father of

American rocketry. His 1919 publication, *A Method of Reaching Extreme Altitude*, commanded worldwide attention and inspired the subsequent deluge of "space ship" stories during the 'twenties and 'thirties. In 1930, a Goddard rocket reached a record altitude of 2,000 feet and a speed of 500 M.P.H.

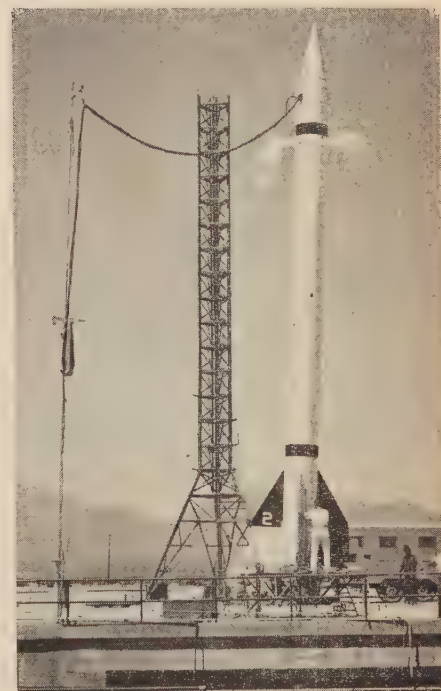
V-2 Development

Meanwhile, with the inception of the Hitler regime in Germany, a young engineer, Werner von Braun, was put in charge of secret rocket research under supervision of the German Army. It was due primarily to his work that Germany developed its "A" series of rocket missiles, the most formidable of which came to be known as the V-2. Preliminary design work on this unit began in 1938, but it was 1942 before the first experimental flight was made.

The V-2 is a supersonic ground-to-ground, guided missile with a range up to 190 miles. As used over England during the last stages



Rocket "mail" tests in Mojave Desert

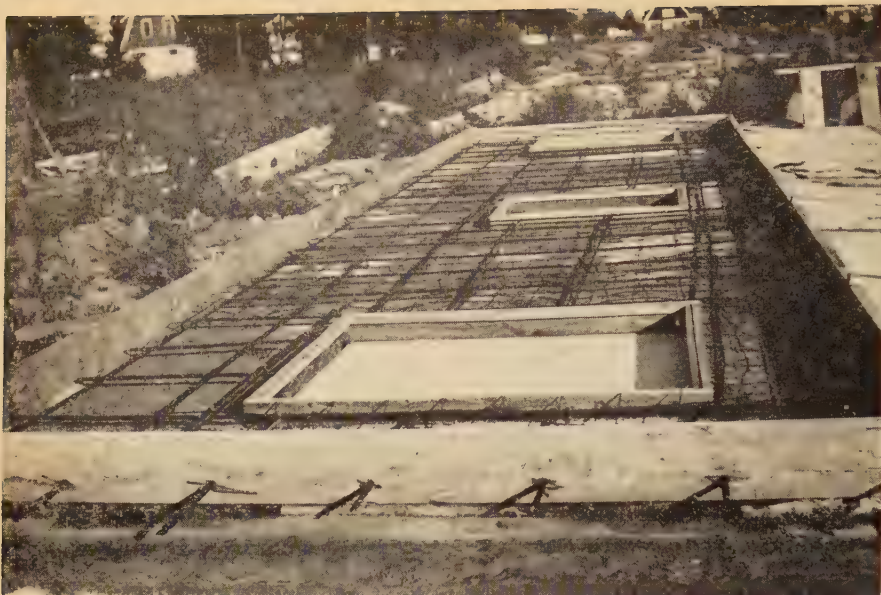


Oxygen vapor puffs from nose of Navy's "Viking Rocket" just before take-off

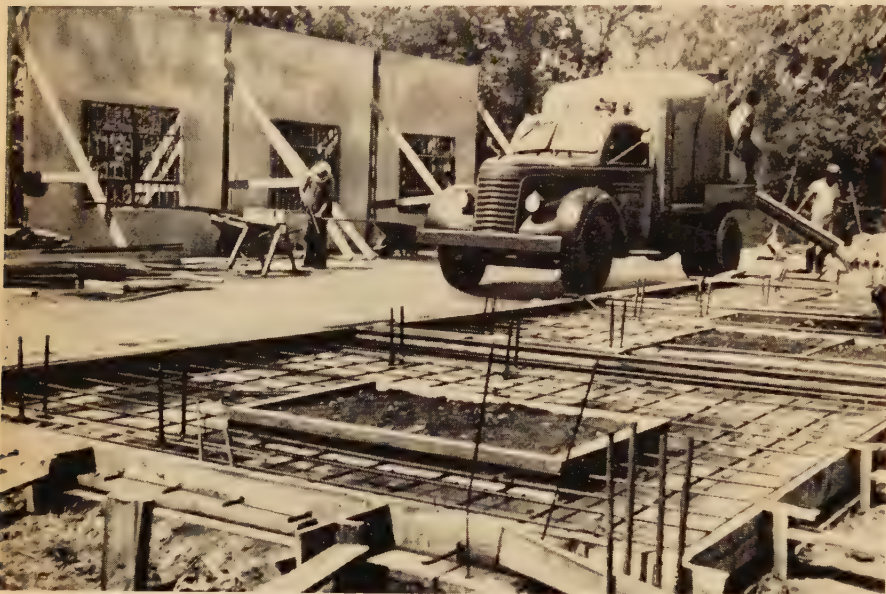
of World War II, it carried a 1,650 pound explosive warhead. Its total loaded weight, however, was 28,500 pounds. Powered by liquid oxygen and a fuel mixture of ethyl alcohol and water, it reached a speed of 3,500 M.P.H. at one point in flight, a factor that made it impossible for either anti-aircraft guns or fighters to shoot it down.

The V-2 is motivated by rocket propulsion, one of the two classifi-

(Continued on page 131)



"Tilt-up" construction begins: horizontal form placed on floor slab is ready for concrete with reinforcement, window frames, conduits in place. Next . . .



... concrete is cast in horizontal forms by conventional method. Note that reinforcing bars extend through form to interlock in center column.



Here a concrete worker screeds off form as he would a floor or sidewalk. The edge forms and window bucks serve as screed guides in this work.

SIDEWALK superintendents stared with more than normal curiosity as construction began recently on a big, concrete warehouse in Houston, Texas. Oddly, the long lines of wooden wall forms that usually are built to hold concrete were not being erected. Instead, workmen were casting the concrete walls, panel by panel, on the floor of the building!

After a curing period, a mobile crane swung into action, gently hoisting the huge slabs of reinforced concrete into an upright position, connecting columns were cast to hold the panels in place, and in the time it often takes to build wood forms alone, a 12,000-square foot warehouse was well on the way to completion.

Marked Savings

Strange as this unorthodox construction method appeared to onlookers, a more important consideration — certainly to the builders — was that they were saving some \$25,000 over conventional building methods. But such economies are not uncommon with what engineers call the "tilt-up" method of concrete wall construction. More than one building expert hails it as "the most important advance in reinforced concrete construction in 20 years."

Tilt-up can be used in both residential and industrial building. Thus far, its biggest use has been in the construction of one and two-story buildings, but higher structures — including one eight-story office building — have also been erected by the method. On these multiple-story structures, the tilt-up walls are cast on upper floors, and later are pulled upward and outward into place.

Tilt-up's big advantage is that it speeds up work and minimizes labor and materials costs. It is easy to see why. In conventional construction, a substantial amount of lumber is needed to erect and support the vertical wall forms before concrete can be placed. Building

BUILT BY TILT-UP!

"Tilt-Up" Concrete Wall Construction Speeds Work and Cuts Labor Costs

By LEWIS A. RILEY

the forms also takes many man-hours of labor. When the walls are cast in a horizontal position, however, 90 per cent of this form work is eliminated. Only edge forms—like those used in paving — are necessary. Window and door frames, electric boxes, reinforcement bars, and whatever else may be needed, can all be laid in place while the form is easily accessible. Then, in a relatively simple operation, the entire assemblage can be "tilted" upright with all complex parts of the wall neatly in place.

In Des Moines, the Luthe Hardware Company figures it saved 40 per cent by constructing its new warehouse and sales office by the tilt-up method. In St. Cloud, Minn., the Holes-Webway Company figures that tilt-up construction saved about 30 cents per square foot of floor area in an 80 by 80 foot printing plant, erected at a total cost of \$24,000. And, in Addison, Ill., just west of Chicago, the L. Borisof Construction Company reports a savings of 25 per cent on the first of a series of tilt-up industrial buildings constructed for the new Parker-Addison Industrial District.

The Idea Is Old

Although the tilt-up idea is not new, its practicality has been greatly increased since the war. Almost 50 years ago, a New York architect designed a two-story house utilizing the idea and 20 of them were subsequently erected. Later, the architect dropped the method because the walls required too long a curing time before they could be raised.

Since then, however, cements which cure rapidly have been developed and this early problem has been overcome.

For many years, a more difficult problem has been to devise a method of tilting the heavy concrete wall panels without buckling them. Before World War II, tilt-up made little progress because the hoisting process then used required large amounts of steel to reinforce the slabs while they were being raised.



Here, a mobile crane tilts up one wall panel



A completed tilt-up industrial building in the Parker-Addison Industrial District just west of Chicago saved builder 25 per cent over usual costs

This extra cost tended to offset the savings resulting from minimized form work.

Then, shortly after the last war, an architect and a contractor in Minnesota came to grips with the hoisting problem. One of their industrial building jobs was being held up by the lack of skilled labor and certain essential materials. Tilt-up, they thought, might work if they could figure a way to hoist the vertical slabs without the need of scarce reinforcing steel. After considerable study, they hit upon an idea that revolutionized the whole process and paved the way for its rapid development.

Erection Procedure

Their procedure followed this pattern: First, foundation walls, footings and the floor slab were constructed in the usual manner. Then a thin layer of sand covered with building felt was spread on the floor to prevent bonding, and forms just the height of the wall thickness and equal to the outside dimensions of the wall panels were set up on the floor. Reinforcing bars were placed in position, the horizontal bars being allowed to project through the side forms six inches in order to extend into the connecting columns after the building had been completed.

The lifting rig was what made fast and consistently successful hoisting possible. After the wall panels had cured, a lifting yoke was attached to bolts which had been set in the concrete. Then the lifting rig consisting of two I-beams fastened to the panels above and just

below the window opening was tightly wedged against the concrete at the bottom edge. An I-beam yoke was attached to the long I-beams so the yoke could rotate as the panels were being raised. Thus, with this hoisting method the panels were relieved of virtually all erection stresses and only light reinforcement was required.

30 Minutes A Panel

In a mere 30 minutes, a panel could be tilted upright with a crane, braced, and wedged into the foundation. In the end, less than 1,000 board feet of lumber was used to build the walls and all of it was later re-used in interior partitions.

Once the hoisting problem had been licked, tilt-up moved ahead rapidly. The postwar shortages of materials and labor made it particularly attractive to builders and, as a result, more tilt-up buildings were constructed in 1946 than in any previous 10-year period. Since then, it has continued to gain in favor.

Not the least of tilt-up's advantages is its ability to telescope building schedules. In Texas, recently, a 45 by 80 foot tilt-up industrial building was erected to the roof line by an eight-man crew in just five working days. Foundation walls were poured and the ground prepared for the floor slab on the first day; then the foundation was allowed to cure for two days. On the second working day, the floor was poured and allowed to cure for four days. On the third working day, 20 wall panels were cast.

These were allowed to cure four days, and on the fourth and fifth working days all 20 panels were hoisted and interlocked with connecting columns.

Since the war, tilt-up has been used in a wide variety of industrial buildings, as well as in the construction of schools, bath houses and even part of the atomic bomb plant at Phoenix, Arizona. It has progressed less rapidly in home building, although it offers several advantages in this field. For one thing, it lends itself to a wider variety of architectural treatments than does pre-fabricated home construction.

Furthermore, the walls themselves can be finished in a number of exteriors. They can be tinted or topped with decorative pebbles or field stone.

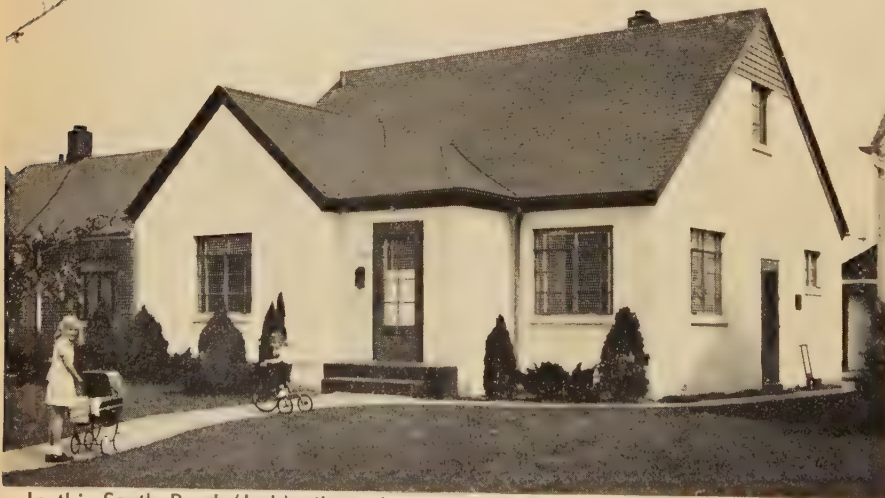
Tilt-Up Homes Built

Already a few large-scale building developments have utilized tilt-up. In the Chicago area, for example, the Robert Bartlett Building Corporation has erected 54 tilt-up homes in La Grange Highlands, faced with Illinois limestone.

One factor favoring the future development of tilt-up is the fact that — unlike some other short-cut methods of construction — tilt-up has encountered no union criticism. In all tilt-up work, union craftsmen handle their customary share of the work as on a conventional job. Cement workers mix and set the concrete, bricklayers place the masonry and carpenters build the wooden forms.

What is tilt-up's future? As yet, it is difficult to say, but the Portland Cement Association believes its future is exceptionally bright. As the PCA puts it, "The housing shortage is never going to be solved by the construction of a few scattered homes here and there.

"By adopting production line methods which the tilt-up system makes possible, a large contractor employing a competent architect and a construction superintendent who knows his business can build entire communities involving scores or hundreds of homes and all of the stores, sidewalks, streets, sewers, garages, the school house and even the community building or church. In other words, he literally would move his factory to the site."



In this South Bend (Ind.) tilt-up house, 17-foot end was hoisted in one piece

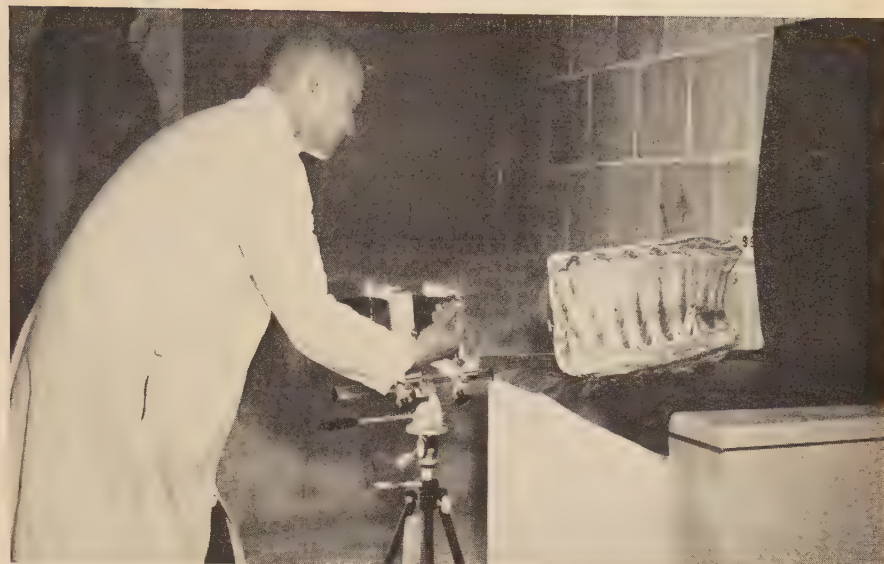
Research Magic At The Stockyards

By

JOHN A. McWETHY

IN A RESEARCH laboratory tucked away on the University of Chicago campus, scientists are working at a task that might be labelled "Operation Peaceful Slumber." Their goal is to determine whether a diet can be devised that will make tomorrow's infant less inclined to wake up at night and issue nerve-jangling shrieks.

The research project — the importance of which will be obvious to any parent — began with the hunch that meat-fed babies sleep more soundly than those fed only milk and cereal. Like scores of other long-range studies undertaken by America's meat packing industry, "Operation Peaceful Slumber" may lead nowhere or it may completely revolutionize our knowledge regarding some vital scientific subject. Chances are, however, that life a decade hence will be affected in more than one way by what now constitutes one of the nation's big-



Photographing test cut of beef at American Meat Institute Foundation

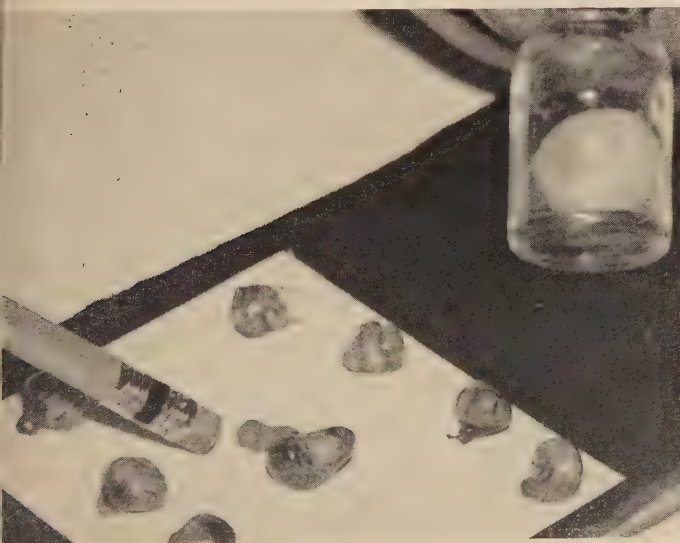
gest industry-wide research programs.

In laboratories across the nation, meat packing research is stabbing at a thousand different question marks. Industry-supported work is directed, for example, at seeking answers to such questions as: Can animal blood be substituted for human blood in transfusions? Can a "meat sliderule" be devised that will enable a butcher to calculate with mathematical precision just how tender and tasty a particular steak will be? How much meat do older people need for good health?

Research, of course, is not new to meat packing; years ago the packers actually learned how to use just about "everything but the pig's squeal." But today the tempo of research activity has picked up sharply.

Research Budgets Up

Swift and Company, biggest of the packers, is spending three to four times as much on research as it did pre-war; Armour and Company, six times its 1939 research budget. Wilson and Company is building a new laboratory at its



Armour Laboratories: (left) pituitaries from which wonder-drug ACTH is extracted, (right) capping vials of drug

plant on the edge of Chicago's stockyards that should be completed this year.

The big packers are not the only firms that are spending more and more on research. At the University of Chicago, a new \$650,000 laboratory building was completed a few months ago, thanks to the financial help of more than 300 packers. Here, the American Meat Institute Foundation will continue its basic research work on meat and related products derived from livestock. This non-profit organization was established in 1944 to take over the job that had been done prior to that on a smaller scale by the industry's trade association, the American Meat Institute.

All told, packers are probably spending between \$8,000,000 and \$10,000,000 a year on research in all its phases. That's not a large amount relative to sales (Du Pont alone spends several times that amount) but it stacks up much more favorably alongside the industry's narrow-margin earnings.

Cost Problem

There's a hard-headed, practical reason for the speed-up in packing house research: stiff competition from new and improved products developed by other industries. Meat-packing byproducts are taking the brunt of this onslaught. Nearly 15 per cent of the dollar return packers obtain from livestock comes from these non-meat products. Furthermore, the amount meat packers receive from by-products has a direct effect on the price of meat -- if they get nothing for a steer's blood and bones, for example, either meat prices must go up or payments to cattle raisers must go down.

The battle lines of this touch-and-go competitive war are drawn right across your own kitchen. One source of trouble: the new synthetic detergents which are an excellent example of the kind of competition animal byproducts are facing. Detergents helped knock an alarming hole into the sales of tallow; their consumption has doubled in the last year and by the end of 1949 accounted for some 35 per cent of all soap and synthetic sales.

Hides have smacked into synthetic rubber and plastics, which

are being increasingly used instead of leather for shoes. With more than five per cent of all shoe soles now being made from synthetic materials, hide prices have slipped sharply. Recently, hides have been selling at prices per pound equal to about 90 per cent of the cost of live steers. Thirty years ago, they were two and one-half times live steer prices. The same thing has happened to lard; vegetable shortening has displaced a large part of the market it once enjoyed. There used to be a trade rule that lard should sell at about the same price per pound as a live hog; now lard sells for only about 60 per cent of the live hog price.

Substitutes Faced

Other byproducts have also run into competition. Plastics have made the skinless hot dog possible, slicing into the market for natural casings made from animal intestines. The pharmaceutical houses have put mold to work turning out a product some researchers say is a good substitute for meat scraps in livestock products. The new product, which has only recently been put on the market, is called "APF" (short for "animal protein factor") and is rich in vitamin B₁₂.

As a result, everything from what happens to people after they eat meat to the grass cattle munch is

receiving the earnest attention of packinghouse researchers. Swift, for example, now employs 250 in its own research laboratories compared to 175 ten years ago. This stepped-up program is responsible for such recent innovations as canned meats for babies (now a multi-million dollar business), lard that keeps without being refrigerated and frankfurters that have skins tenderized by enzymes from pineapple juice.

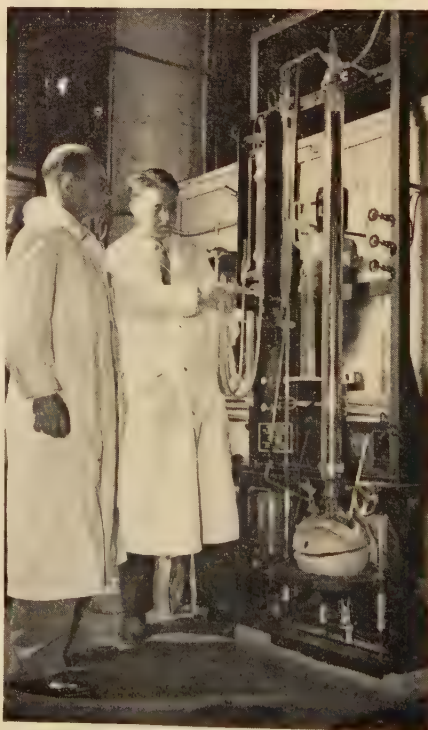
In addition, Swift has farmed out a number of research projects to universities and other organizations. The meat-sleep research, for example, is sponsored by Swift. Although the project hasn't gone far enough to produce conclusive findings, it may ultimately lead to increased sales of canned baby meat.

Swift, through its farmed-out research work, is delving into such other nutritional mysteries as the amount of protein old folks require, the relationship between meat and rheumatic fever and many more. A large part of this outside research is aimed at improving the quality and cutting the cost of growing livestock.

Better Pasturage

Since 1941, Swift has made grants of over \$2,000,000 to finance research by colleges and other agencies. A major part of this money has gone for agricultural research. One study is designed to secure better types of pasture grass for the southeast. Another, just getting under way, will seek to find out how the chemical composition of forage crops produced in the corn-belt is influenced by environmental factors. Others involve attempts to learn how to duplicate the milk of a sow synthetically and to learn how much fertilizer can be used with profit in general farming in Wisconsin.

In another part of the stockyards, Armour's 200 researchers (it had only 70 in 1939) have been in the news in recent months. Armour is particularly interested in finding new chemicals that can be produced from livestock and then discovering applications for them. "The day may come when animals will be too valuable to eat and packers will sell meat chemicals instead of steaks", is the way Victor Conquest,



Swift research workers study composition of fats, seek new uses for by-products

(Continued on page 129)

Two-Way Street

Report On A Working Employee Relations Plan

By **CLOUD WAMPLER**

President, Carrier Corporation



Cloud Wampler

EXPECT to talk in terms of cases rather than in terms of generalities. As a starting point, let me say this — It is my strong conviction that far too large a part of American management now renders only lip service to the need for creating thoroughly effective channels of communication and, more important, to seeing that these channels are properly used.

Naturally, there are many exceptions. However, these exceptions become fewer in number if we narrow the definition of "effective channels" to mean those in which information flows not only from the top to the bottom but also from the bottom to the top. Granted, the building of this sort of two-way street is not easy. It requires hard work — continuing hard work — on the part of management, including top management. But the job can be done, and it is absolutely necessary that we do it if we are to win our way out of the situation that today confronts our country.

I'd like to pose these questions: What are the objectives of a communications program? Where should the two-way street lead? It seems to me that there are at least two basic answers.

Two Objectives

First, we must accomplish better understandings within our various companies for the purpose of doing a better job for all parties directly concerned — the stockholders, the employees, the customers and the community.

Second, it seems to me that we should go far beyond any intra-company undertaking. And here I mean to say that we need to build positive knowledge that will counteract the phony philosophy of "something for nothing" that cur-

rently is gaining such great momentum in this land of ours.

There is no reasonable doubt but that we are moving rapidly in the direction of collectivism. As a matter of fact, the tempo is faster than many of us realize. And the job of selling "something for nothing" is being done with amazing effectiveness by men who seek to keep themselves in power or to obtain power. If I had to designate the keystone of the appeal that is being made these days, my choice would be this — that federal funds are free funds. And such is not true. It is a delusion.

Easy To Sell

Unfortunately, this bunk that federal funds are free funds is terribly easy to sell. And, of course, it takes quite a bit of stamina to stand up against nearly twenty years of repetition on the part of the New Dealers and the Fair Dealers that the weak can be strengthened by weakening the strong; that the wage earner can be helped by pulling down the wage payer; that sound security can be established on borrowed money, and that the poor can be made better off by destroying the rich.

I feel quite sure that this audience will agree on two points: that business simply must combat this sort of propaganda, and that an exceptionally poor job of combating has been done thus far. One reason for this, in my opinion, is that too much faith has been

pinned to the belief that a lasting understanding of complex issues can be inculcated by speeches and advertisements that are aimed at the country as a whole.

Actually, the job has to be done right in our own backyards and along our own main streets. It is a personal job, a company job and a community job, and not one that can be done at the federal or even state level.

Later, I want to return to this point of community activity. But right now I must get back to the subject of employer-employee communications — the two-way street.

What Carrier Does

At this point, I am going to talk about certain things that we do in our own company. However, please don't get the idea that we of Carrier think we know all of the answers. Most certainly we do not. However, it is a fact that a number of our activities have produced excellent results. And I know of no better way to cover a subject of this kind than to deal with actual cases.

Let me deal first with what might be called day-by-day communications or, more specifically, direct line communications.

One obvious basic requirement for an effective system is that the chief executive of the company should formulate a definite policy and make this known to all members of the organization. They should understand that to the greatest practical extent information

SPEECH OF THE MONTH

Made before the American Management Association, February 15, 1950

(Continued on page 125)

GAO-Watchdog Of The Exchequer

Effectiveness Of Congress' Auditing Agent Is Being Cut

DURING the past few years Washington observers have witnessed the spectacle of a government agency being whittled down and made impotent to carry on because it saves the public money.

The agency during the past nine years has put into the U. S. Treasury \$642 million — about two and one-half times as much money as it took out to run itself during the same period.

The agency's cardinal sin is that it spends less than it takes in. Also, during the past four years the agency cut its staff almost in half and still has been able to carry on its functions.

The unique government bureau which runs so contrary to the accepted pattern is the General Accounting Office (GAO) headed by the comptroller general. Protecting the public purse, it leads a miserable life. Right now the GAO is in the thick of the fight for economy and efficiency. It is the Congress' own agency, the great bulwark erected by the Congress against illegal and improper use of public moneys and unbridled waste and extravagance.

Aid For Congress

The GAO was set up by the Budget and Accounting Act of 1921 as an arm of the Congress and has always been a part of the legislative branch of the government. Congress emphasized that in the 1945 Reorganization Act and again in the 1949 Reorganization Act. Its broad function is to audit and settle the public accounts and advise and assist the Congress in matters relating to the public moneys.

It is a non-partisan agency. Its chief, the comptroller general, is an agent of the Congress. He and the assistant comptroller general are appointed for terms of 15 years and can be removed only by the

By **JOHN L. KENT**

Congress. The comptroller general cannot be reappointed.

The present incumbent, Lindsay C. Warren, was drafted for the position and took office in November 1940 after 16 years of service as a member of Congress.

The legislative control of public funds is the basis upon which the fiscal policy of our government is built. It is a part of our system of checks and balances. Checks by the Congress itself and by its agent are means of enforcement.

Big Additional Saving

The \$642 million which the GAO put back into the treasury had for the most part been illegally or otherwise improperly paid out or withheld. But even that staggering sum actually recovered is believed to represent only a small part of what the GAO has done and is doing for the government.

Further amounts impossible to estimate are saved by the very existence of the office itself. The sure knowledge that the GAO is there checking on all transactions is the most powerful of all deterrents to illegal, improper and improvident use of public money.

Audits made by the GAO are for the most part after the fact, or post audits, and are of two general types. The government-type audit is performed on the basis of the personal accountability of the officers of the government who have been entrusted with public funds. This type is used generally except in connection with government corporations.

The commercial-type audit is relatively new in governmental accounting. It is similar to that performed by private accounting firms for business enterprises and is applied to government corporations and a few other federal

agencies engaged in business activities.

There is no question that the GAO is saving the taxpayers a great deal of money. But, the history of this "money-saving" agency shows that protecting the public purse can often be an uphill fight. After 1933, for example, the GAO became a center of vigorous controversy, partly because the then comptroller general was personally hostile to the New Deal. He held up numerous payments in connection with New Deal experiments and enterprises because they lacked proper authorization in congressional appropriations.

Since he could not be removed an attempt was made in 1937 to abolish the Office, transferring some of the functions to the Treasury Department and retaining others in a newly-formed agency to be headed by an auditor-general.

The suggestion for this change was made by the President's Committee on Administrative Management, ostensibly in the interest of efficiency. The move failed and further attempts to make the GAO subservient to the executive branch of the government have not been made since.

Government Corporations

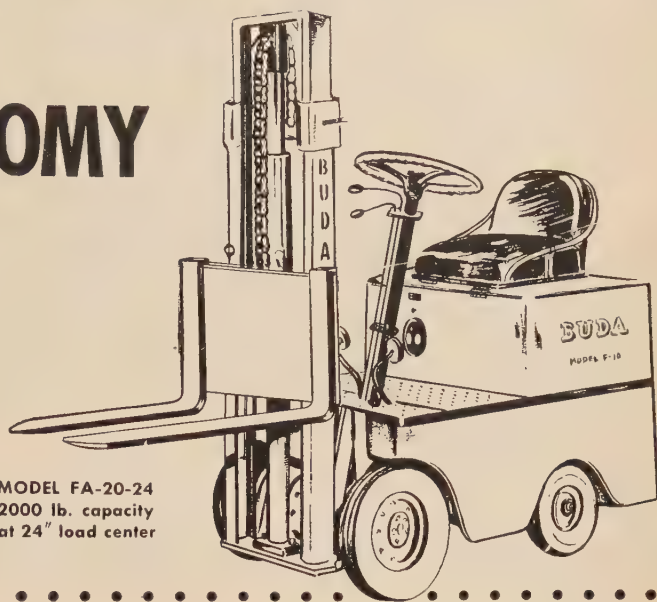
At the time of the enactment of the Budget and Accounting Act, government corporations were not of material importance in the governmental structure and no provision was made in that act for an audit of their financial operations. But as a consequence of the depression emergency and World War II, over 100 government corporations were created to engage in many types of enterprise by 1945. For the most part, their budgets and programs were not approved by Congress, nor were their expenditures audited by the GAO. Then, in 1945, Con-

(Continued on page 112)

BUDA FORK TRUCKS

Handle More Loads

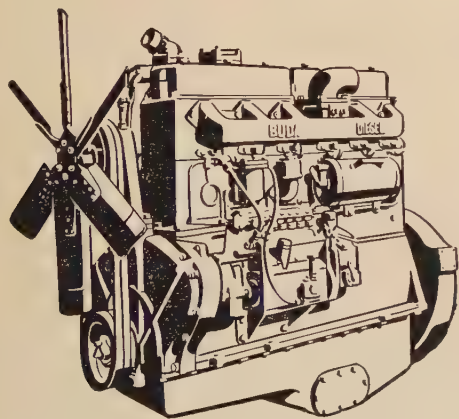
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The Buda Company, Harvey, Illinois



A battle is being waged along Constitution Ave. for more power over monopoly

Answer To A "Loaded" Question

LAST year a provocative series of questions was put to the Federal Trade Commission. There were six in all, but the second question was loaded.

"Why is it," the agency was asked, "that monopoly and monopoly power have developed throughout the years despite the authority and responsibility granted to the Federal Trade Commission?"

The questioner was Representative Wright Patman of Texas, chairman of the House Small Business committee. Patman simultaneously announced an investigation of the FTC. He expressed dissatisfaction with its effectiveness, terming it a "modern Rip Van Winkle which must be aroused to halt the gouging tactics of big business."

Behind Patman, however, was an unofficial advisory panel representing farmers, industrial wage earners, small business, and co-operatives. His six questions grew out of a conference held in September with people from the AFL, CIO, American Farm Bureau,

The FTC "Suggests" Its Cure For Monopoly

By JACK ROBINS

Farmer's Union, National Association of Retail Druggists, and a dozen other organizations.

These groups were dissatisfied with the administration of anti-monopoly laws which the FTC and the Justice Department's anti-trust division are charged with enforcing. Hence the "why haven't you stopped beating your wife?" tone of the key question. The next, more objective in tone, were nevertheless leading:

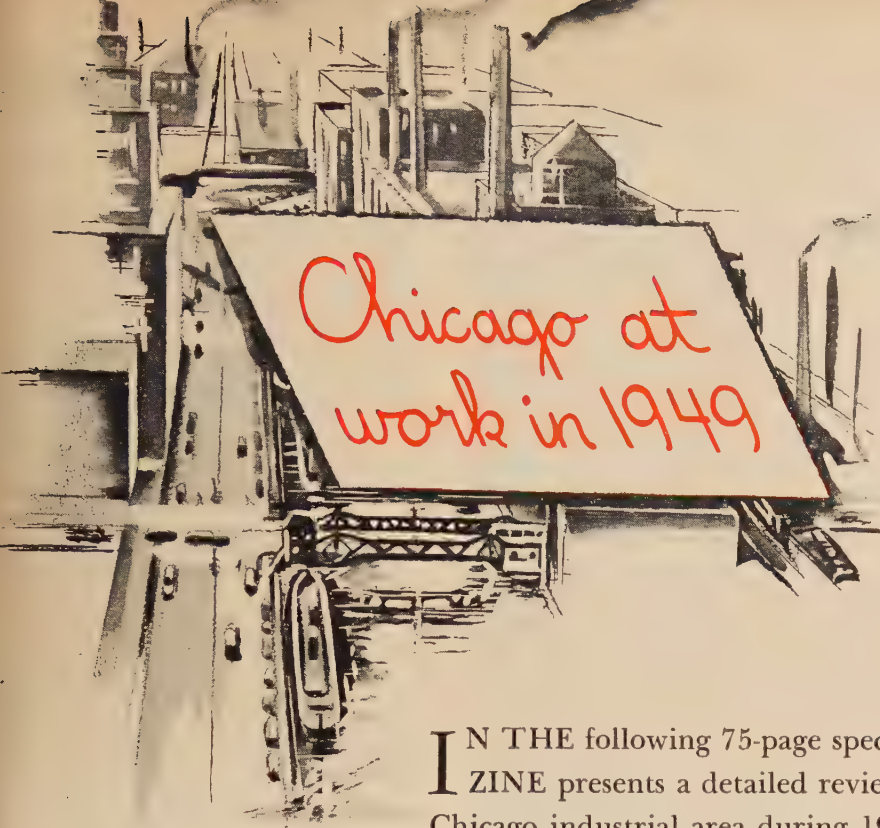
"Does the FTC need greater authority of a statutory nature? If so, what additional authority? Does the FTC need greater assistance in the way of appropriations from Congress?"

Recently the FTC replied. In 74 typewritten pages it tacitly con-

ceded the underlying premise of the key question—that monopoly power has grown despite governmental attempts to curb it—and since it is in the nature of bureaucracy to explain shortcomings in terms of imperfect legislation or inadequate funds, the answer was, in effect: "We need more power and more money."

As to money, the FTC cited figures and left the committee to draw its own conclusions. They showed that despite a yearly increase in appropriated funds for the last four fiscal years, FTC requests have been cut, on the average, 33 per cent by the budget bureau and 16 per cent further by Congress. Its work has grown as

(Continued on page 120)



Chicago at work in 1949

IN THE following 75-page special section **COMMERCE MAGAZINE** presents a detailed review of the record of business in the Chicago industrial area during 1949. It is the most comprehensive of ten annual business surveys which have been compiled by **COMMERCE** since 1941. Last year's record reflects the complex economic influences which accompanied the first sharp downward business readjustment of the postwar period. The manner in which a number of the more important segments of Chicago's highly diversified business community were affected by nationwide deflationary pressures is given detailed attention in each industry study.

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Chicago Aerial Survey



State Street year was helped by heavy Christmas buying.

Korth photo

Prices Off

WHETHER the year 1949 will be remembered as the "aspirin era" for retail selling, no one can say for sure. But certainly few Chicago retailers came through the year of shifting and at times unpredictable buying trends without a headache now and then. It was a year in which competition sharpened, inventory control became a matter of day-to-day importance, and colorful salesmanship exploded out of its war and postwar hibernation.

Good Year By Normal Standards

By all normal standards, retailers enjoyed a prosperous year. But by comparison with the previous year of record sales, business was off. The decline was especially pronounced in the first half of 1949; then in the summer months business worked irregularly upward and finally in the fourth quarter turned strongly higher. Department stores sales slid to a low point in July when the Federal Reserve Bank index stood at 166.4 compared to 199.4 the previous July. Business snapped back, however, in August and September paving the way for a fourth quarter

ANNUAL INDEX OF DEPARTMENT STORE TRADE IN CHICAGO

(1935-39=100)

1949	225.6	1943	137.6
1948	241.3	1942	128.2
1947	234.2	1941	120.7
1946	216.4	1940	109.4
1945	167.4	1939	104.1
1944	151.4	1938	97.1

MONTHLY INDEX OF CHICAGO DEPARTMENT STORE TRADE

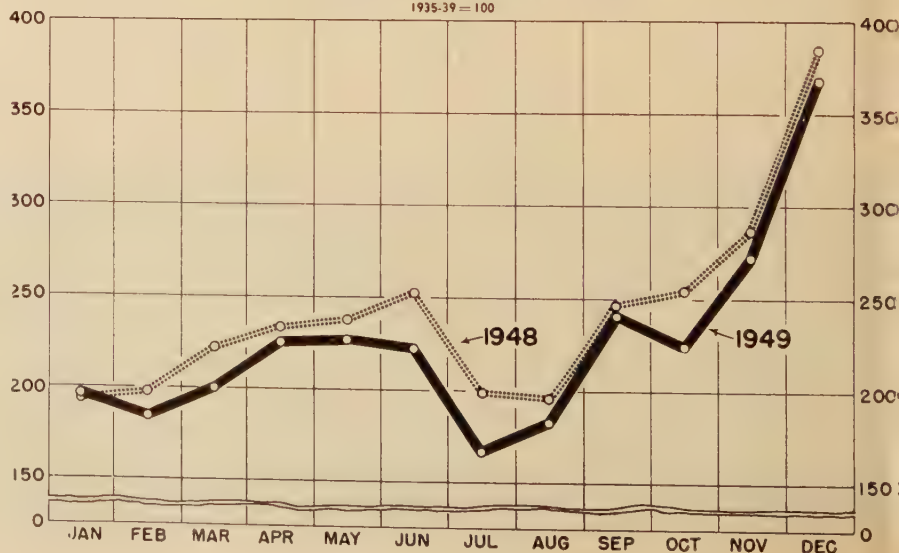
(Daily average: 1935-39=100)

	1949	1948
January	196.9	192.7
February	183.4	197.7
March	199.7	221.6
April	224.6	232.6
May	226.8	237.5
June	222.4	251.7
July	166.4	199.4
August	182.4	195.8
September	240.2	244.7
October	223.6	253.0
November	270.6	285.0
December	368.1	384.2
Year	225.6	241.3

Source: Federal Reserve Bank of Chicago

DEPARTMENT STORE SALES INDEX

1935-39 = 100



And Trade Slightly Lower In '49

advance which lifted the index to 368.1 in December, compared to 384.2 in December of 1948.

Total dollar sales at retail for the Chicago metropolitan area last year are estimated at \$4,000,000,000. This represented a 4.7 decline from the record \$4,200,000,000 level of 1948, but still exceeded the 1947 level of \$3,800,000,000.

Effect Of Price Cuts

Lower prices accounted for a substantial portion of the decline in dollar sales, for in most consumer lines unit volume was close to 1948 levels. Automobile and food sales continued at high levels throughout the year, adding stability to the overall retail trade picture.

By far the darkest months of the year, so far as retailing was concerned, were those of the first half. Apparel and home furnishings prices, for example, moved steadily downward from January through June, as retailers battled to stem declining unit sales. During the same months, home appliance sales also bogged down leading to what ultimately turned out to be undue inventory conservatism.

Early in 1949 some retailers began offering free groceries and stocks of frozen foods to revive lagging refrigerator sales. Others re-adopted the depression-era tech-

nique of selling refrigerators—along with a number of other appliances—on the pay-as-you-go coin meter plan.

During the late Summer months, however, home furnishings buying picked up sharply, partly in response to a rising rate of completed residential building and partly in response to hard-hitting sales campaigns. As a result many of the former inducements to buy were temporarily discarded. Shortly after, the effects of restricted inventories began turning up in the small appliance field. Mounting demand in the latter months of the year actually left many retailers with stocks virtually exhausted.

Chicago department stores, aided by strong pre-Christmas volume, wound up the year with total dollar sales estimated at \$501,000,000, as compared with \$537,000,000 during the previous year. Although this represented a decline of 6.7 per cent, here again lower price levels accounted for most of the drop. Unit volume was probably equal to or greater than during 1948, according to trade sources. Most department stores reported much greater inclination among patrons to buy in budget departments last year.

Another factor which contributed to the favorable second-half show-

ing of most retailers was the relaxation of credit restrictions in the latter half of the year. As the Department of Commerce put it, "The expansion of credit in 1949 had the effect of supporting the volume of retail trade in a period in which personal incomes were moderately declining."

The amount of automobile installment credit outstanding rose steadily in 1949, but financing of other durable goods was off in the first quarter. Federal Reserve Board surveys indicate that retailers were using more stringent credit terms in the first three months than those required under federal credit regulations then prevailing. As Regulation W was eased, then finally terminated in June, retailers began relaxing their down payment and maturity terms.

WHOLESALE TRADE

Wholesale trade in Chicago closely followed the pattern of retail trade in 1949, declining to a low

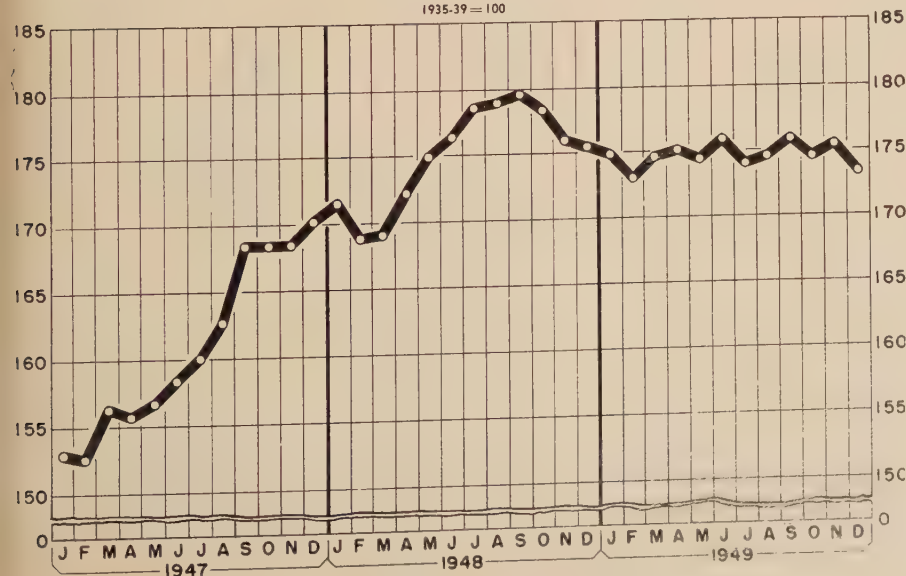
COST OF LIVING INDEX IN CHICAGO

(1935-39=100)

	1949	1948
January	174.9	171.5
February	172.9	168.8
March	174.5	169.0
April	175.0	172.1
May	174.2	174.9
June	175.9	176.2
July	173.9	178.6
August	174.4	178.8
September	175.8	179.4
October	174.4	178.1
November	175.3	175.9
December	173.2	175.4

COST OF LIVING INDEX IN CHICAGO

1935-39=100



SALES TAX IN COOK COUNTY*

	1949	1948
January	\$10,030,172	\$9,553,134
February	7,245,498	7,255,315
March	7,165,046	7,171,534
April	7,577,570	7,899,476
May	7,880,186	7,627,664
June	7,551,783	7,688,411
July	7,778,631	8,223,612
August	7,254,153	7,517,202
September	7,155,960	7,183,594
October	7,669,222	7,447,031
November	7,486,112	8,251,708
December	7,565,404	7,947,479
Total	\$92,359,737	\$93,766,160

*These figures represent collections by the state on sales taxes paid the preceding month on retail purchases. Thus, the tax figure for January, 1949, reflects the volume of retail trade in December, 1948.

ebb in July and recovering gradually from then on. Sales of the city's 9,100 wholesalers have been estimated at \$10,800,000,000 in 1949, a decline of 4.4 per cent from the 1948 volume of \$11,300,000,000.

Fewer Buyers at Shows

The number of trade expositions rose to 238 last year from 220 in 1948, but in almost all cases both attendance and buying were down from the preceding year.

The semi-annual homefurnishings markets held in Chicago in January and July last year were typical of what happened at most trade shows. Buying at both markets was exceptionally cautious. Prices were off sharply in July from the Janu-

ary levels. At both markets, unit volume as well as the dollar volume of orders was off from their respective 1948 markets.

The 1950 January furniture market witnessed a complete reversal of the trend with attendance at an all time high, prices up slightly and buying very heavy.

Inventories of durable goods wholesalers showed a downward trend throughout the year and in November, the last available month, were considerably below the month a year earlier. Inventories of non-durable goods firms declined until June then started building up but also wound up below November under a year ago.

POSTAL ACTIVITY

THE volume of mail handled by the Chicago Post Office continued its upward trend in 1949, mirroring a rising level of business activity in the area. Postal receipts rose to \$114,241,251 in 1949 from \$102,434,678 the preceding year. This 11.52 per cent gain compared with a 7.86 per cent advance during the previous year.

First class incoming mail showed

the largest increase of any postal class in the year, totaling 1,759,461,287 pieces against 1,649,127,327 in 1948, a 6.69 per cent gain. The volume of outgoing first class mail pieces was up 2.63 per cent.

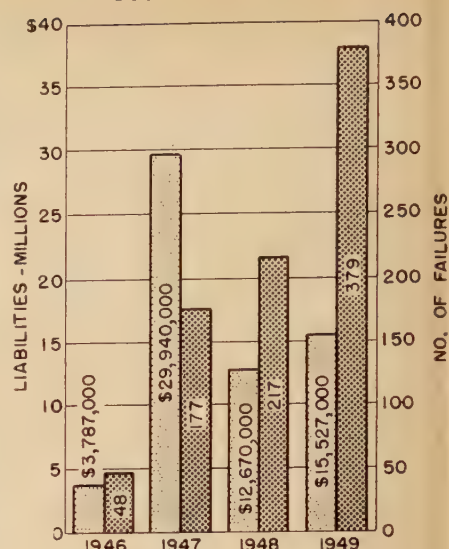
The heaviest concentrations of mail were in different classes last year than in 1948.

A comparison of 1949 with 1948 postal statistics follows:

	1949	1948	Per Cent Gain
Postal Receipts	\$ 114,241,251.62	\$ 102,434,678.66	11.52
Outgoing Mails:			
First Class, pieces	1,573,472,150	1,533,129,300	2.63
Circulars, pieces	794,690,041	783,643,145	1.40
Parcel Post, sacks	28,607,562	28,099,625	1.80
Other Classes, sacks	9,441,698	9,708,252	2.75*
Incoming Mails:			
First Class, pieces	1,759,461,287	1,649,127,327	6.69
Circulars, pieces	109,552,915	170,765,365	35.85*
Parcel Post, sacks	9,906,102	10,327,381	4.08*
Other Classes, sacks	4,599,127	6,616,162	30.49*
Domestic Money Orders Issued:			
Amount	\$ 62,936,646.86	\$ 70,215,483.92	10.36*
Transactions	3,396,681	3,576,256	5.02*
International Money Orders Issued:			
Amount	\$ 494,616.60	\$ 579,921.12	14.70*
Transactions	29,724	31,190	4.70*
Domestic Money Orders Paid:			
Amount	\$ 362,626,136.64	\$ 407,164,307.39	10.93*
Transactions	33,151,199	36,610,817	9.44*
International Money Orders Paid:			
Amount	\$ 65,152.17	\$ 138,586.46	52.98*
Transactions	6,565	9,350	29.78*
Postal Notes Issued:			
Amount	\$ 12,850,517.70	\$ 12,268,432.03	4.74
Transactions	2,447,035	2,470,390	.94*
Postal Notes Paid:			
Amount	\$ 40,717,518.60	\$ 35,949,896.31	13.26
Transactions	7,636,779	6,971,750	9.53
United States Savings Bonds:			
Amount Sold	\$ 16,146,206.25	\$ 16,644,056.25	2.99*
Number Sold	289,934	273,751	5.91
Postal Savings:			
Amount on Deposit	\$ 220,194,916.00	\$ 226,125,200.00	2.62*
Number of Depositors	290,420	302,267	3.91*
Motor Vehicle Service			
Miles traveled	10,262,080	9,103,816	12.72

*Decrease.

BUSINESS FAILURES



BUSINESS FAILURES

CHICAGO fared better than the country as a whole in relation to the severity of business failures in 1949. However, the total number of business casualties rose sharply last year in both the city and the nation. The increase continued a trend that began shortly after the war.

The liabilities of Chicago failures in 1949 amounted to \$15,527,000, an increase of 22.5 per cent over the comparable \$12,670,000 figure in 1948.

The most encouraging note in the statistics is the fact that the average liability for each of Chicago's business failures has been declining steadily since 1947. In 1949, the average liability per failure in the city was \$40,968, compared with \$58,000 in 1948 and \$169,000 in 1947.

CHICAGO BUSINESS FAILURES

	1949		1948	
	No.	Liabilities	No.	Liabilities
Jan.	21	\$ 2,104,000	12	\$ 329,000
Feb.	31	1,866,000	21	1,911,000
Mar.	38	4,556,000	30	1,222,000
Apr.	29	679,000	12	316,000
May	32	927,000	21	342,000
June	34	601,000	19	378,000
July	35	1,184,000	19	499,000
Aug.	35	754,000	17	232,000
Sept.	26	533,000	8	219,000
Oct.	33	817,000	17	228,000
Nov.	28	684,000	17	6,191,000
Dec.	37	822,000	24	803,000
Total	379	\$15,527,000	217	\$12,670,000

Note: Dun and Bradstreet defines a failure as follows: "A business failure, as defined for this record, occurs when a commercial or industrial enterprise is involved in a court proceeding or a voluntary action which is likely to end in loss to creditors."



Korth photo

Output Dips Below Record '48 Level

CHICAGO'S industrial community experienced another year of high business volume in 1949.

True, there were few new records written into the area's commercial and industrial history, for the previous year of extraordinarily high production had sent Chicago's—and the nation's—economy to the peak of a prolonged post-war cycle. Last year the trend was downward—gradually. Yet by comparison with any normal period, 1949 was a good year for most segments of industry in the area.

For some years now, economists have been pointing out that the most distinguishing feature of Chicago's economic structure is its unparalleled diversity. Last year's experience provided added evidence of this unique diversification, for the trend of economic life in the Chicago area in 1949—total production, employment and payrolls—mirrored almost exactly the trend of business conditions throughout the nation.

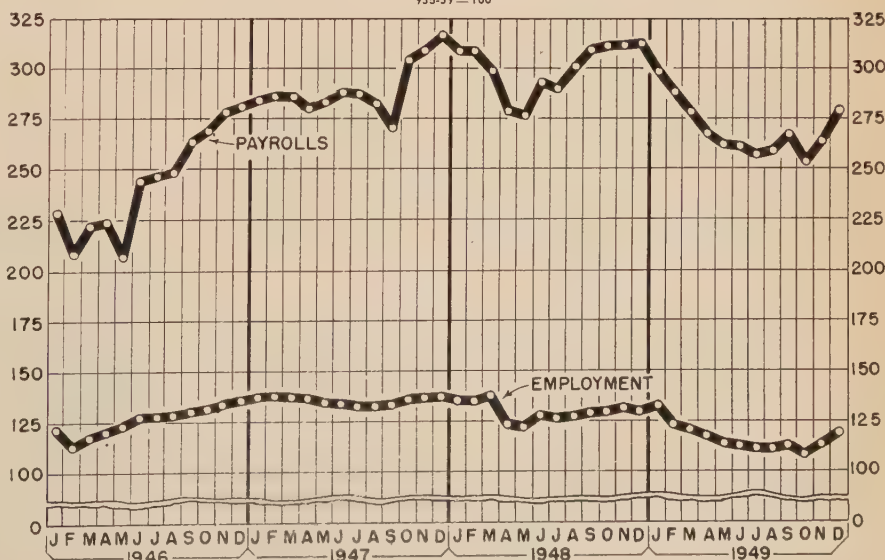
The Federal Reserve Bank of Chicago estimates that total non-

agricultural employment in the Chicago industrial area averaged approximately 2,276,000 in 1949, against an estimated average of 2,365,000 in the previous year. Despite the record levels reached in 1948, employment actually began declining toward the end of that year. This decline continued

through the early months of 1949. In January, some 2,343,000 non-agricultural workers are estimated to have been employed in the area. By July this figure had drifted to a low point of around 2,252,000, reflecting a steady decline in the tempo of general business activity during the first half.

FACTORY EMPLOYMENT AND PAYROLLS

935-39 = 100



It was at this midsummer low point, however, that deflationary pressures relaxed and business began firming up again. Renewed strength appeared first in the non-durables. By the end of the second quarter, for example, Boston's shoe-making industry and New York's apparel trade were beginning to shake loose from a serious six-month slump. The uptrend came later to Chicago's more diversified economy, for it was not until August that employment finally turned upward in this area.

The second half would have shown a steady upswing for the Chicago area had it not been for the October steel strike, which abruptly punctured the employment level all over again. Even by the end of the year many steel using industries had not yet fully recovered from the crippling effects of the strike. Nevertheless, overall employment resumed its uptrend in November and December, winding up the year at about 2,278,000, a shade above the average for the 12-month period.

Last year's three per cent decline in total non-agricultural em-

FACTORY EMPLOYMENT AND PAYROLLS — MONTHLY

	(1935-39=100)			
	Employment		Payrolls	
	1949	1948	1949	1948
January	126.7	135.0	298.8	308.4
February	123.7	135.1	288.9	308.7
March	120.4	132.4	278.2	298.2
April	117.6	123.4	267.9	279.1
May	114.3	122.0	261.7	276.3
June	112.9	127.5	260.4	293.7
July	110.8	126.0	256.2	289.9
August	111.0	126.9	258.5	300.9
September	113.4	129.2	266.8	309.0
October	108.5	129.8	253.2	310.9
November	113.6	130.4	263.6	310.9
December	114.5	129.5	272.6	311.2

Source: Illinois Department of Labor.

ployment in the Chicago area was due chiefly to an eight per cent decline in manufacturing employment, a five per cent decline in transportation employment (in turn reflecting primarily reduced railroad employment) and a two per cent decline in wholesale and retail trade employment. Some Chicago area industries on the other hand increased employment totals in 1949, notably finance (up four per cent), the service fields (up two per

FACTORY EMPLOYMENT AND PAYROLLS — ANNUAL

	(1935-39=100)	
	Employment	Payrolls
1949	115.6	268.9
1948	128.9	299.8
1947	135.0	289.8
1946	126.4	242.9
1945	132.3	254.7
1944	155.6	298.9
1943	155.7	266.2
1942	140.9	203.4
1941	130.8	162.2
1940	108.7	119.0
1939	99.1	104.5
1938	93.8	93.7
1937	115.1	123.1
1936	100.4	96.6
1935	91.6	82.0

Source: Illinois Department of Labor.

cent) and construction (up one per cent). Government employment also rose an estimated three per cent in the Chicago area, due partly to the recruiting of additional teachers.

In the manufacturing field, durable goods employment declined about 10 per cent in the Chicago area, or about twice as sharply as non-durable goods employment. Each of these employment declines matched within a fraction of one

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1949 ● 1.80⁶
1948 ● 3.40
1947 ● 3.25
1946 ● 2.87⁵
1945 ● 2.20
1944 ● 2.20⁴
1943 ● 2.00
1942 ● 1.90
1941 ● 2.15
1940 ● 2.15
1939 ● 2.05³
1938 ● 1.70
1937 ● 2.10
1936 ● 2.07²
1935 ● 2.45¹
1934 ● 2.50
1933 ● 2.00
1932 ● 2.12
1931 ● 2.50
1930 ● 2.00
1929 ● 2.42

1. 1935—33⅓% stock dividend

2. 1936—3-for-1 stock split

3. 1939—5% stock dividend and rights

4. 1944—rights voted

5. 1946—2-for-1 stock split and rights

6. 1949—Adjusted on basis of 2-for-1 stock split

*ON BASIS OF TOTAL NUMBER OF SHARES OUTSTANDING AT THE CLOSE OF EACH YEAR.

percentage point similar declines throughout the nation. Overall durable goods employment was cut back by an estimated 11 per cent drop in iron and steel, a 10 per cent employment drop in non-electrical machinery, a 12 per cent drop in electrical machinery and a seven per cent drop in the number of workers employed in the production of transportation equipment.

The relatively good showing in non-durables reflected in part the fact that both foods and petroleum—in which Chicago is a leading production center—enjoyed a consistently good volume of business throughout 1949.

Employment Drop

In the city of Chicago alone, the factory employment index compiled by the Illinois Department of Labor last year averaged out at 115.6 per cent of the 1935-39 average, compared with 128.9 per cent in 1948. Last year's index was the lowest since 1940, when it stood at 108.7. The month-by-month index was also substantially below 1948, reaching lows of 110.8 in July and 108.5 in October, compared to

126.0 and 129.8 in the same months of the previous year.

The department's annual factory payroll index, also confined to the city of Chicago, declined to 268.9 per cent of the 1935-39 average, as compared to 299.8 in 1948 and 289.8 in 1947.

Output Off About 8%

Manufacturers' sales in the Chicago industrial area in 1949 amounted to approximately \$11,000,000,000, according to estimates of the Federal Reserve Bank of Chicago. The bank estimates that durable goods production approximated \$5,500,000,000 and non-durable goods production about the same level. Compared to 1948, however, this balanced level reflected a decline of about 10 per cent for the durables and only five per cent for the non-durables.

The relatively sharper drop in the production of durable goods was brought on by a variety of influences, among them a steep decline in the purchases of capital equipment in the Chicago industrial area, the steel strike (accounting for virtually a full month of

lost production) and the first half slump in home appliance sales.

One highly significant feature of Chicago's economic life in 1949 was the fact that lagging sales in many fields were translated back to the manufacturing level with astonishing speed. It was a trend that caught more than one manufacturer by surprise. In appliances, for example, dealer inventories had been built up to substantial levels when the decline in consumer buying set in early in the year. As a result, dealers promptly cut back their order volume and manufacturers, in turn, curtailed production almost as quickly to await a shortening of dealer stocks.

Whether this development will in the long run prove a benefit to industry is a matter of speculation among economists. Certainly many manufacturers had allowed their finished inventories to fluctuate freely in previous postwar years. Now, the channels between manufacturer, dealer and buyer were becoming more tightly knit, and basic producers were gauging their production levels to keep pace more closely with their actual volume of orders.

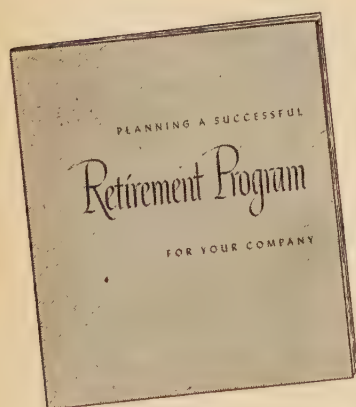
Among the non-durables, the sharpest production declines occurred last year in leather and apparel (particularly men's clothing). Production in the paper and printing industry in the Chicago area is estimated to have declined about five per cent in 1949 and in the chemical industry, also about five per cent.

Productivity Rose

Declining payrolls and increased numbers of job-seekers proved beneficial to industry in one respect. Indications are that productivity among individual workers increased more in 1949 than in any previous postwar year. A COMMERCE MAGAZINE survey of Chicago area manufacturers disclosed that, after a war and postwar interruption, productivity was again rising. The increase was attributed partly to lower turnover and the increasing incentive to hold a job, but even more so to better machinery, plus improved planning, materials handling and plant organization.

The upturn in productivity did not extend to all lines of business. The best showings appeared to be

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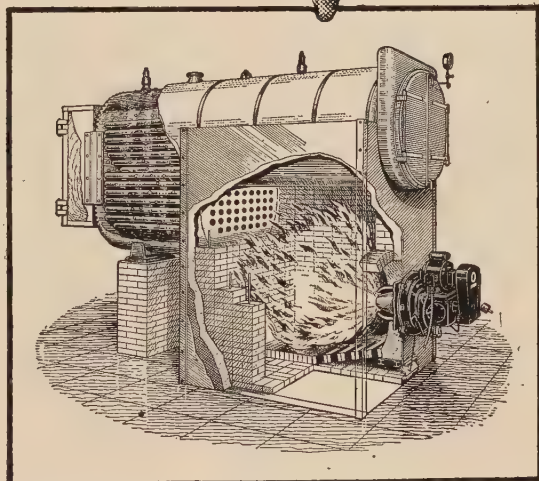
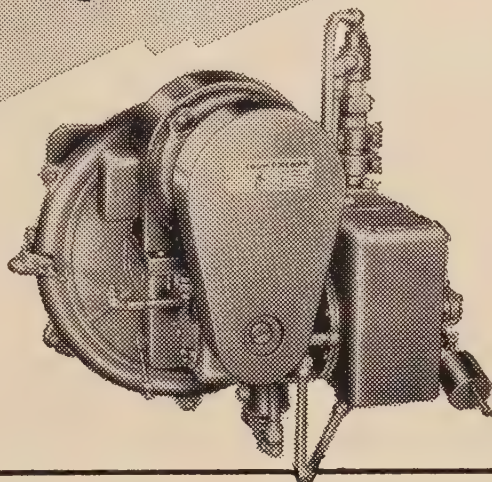
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Florsheim Shoe Company's plant, first big downtown plant built in decade

Record Decade In Plant Building

THE year 1949 closed a decade during which the investment in industrial plants and equipment was the largest in the history of the Chicago area. This tremendous growth also exceeded that of any other industrial area in the nation. During the 10-year period, Chicago's business community poured out some \$2,000,000,000 for expanded facilities, and in so doing created employment for 30 per cent more people and increased the value of the area's production by two and a half times.

A table of industrial expansion during the 'forties follows:

1949	\$102,787,000
1948	156,279,000
1947	181,297,000
1946	184,488,000
1945	143,118,000
1944	80,808,000
1943	162,239,000
1942	569,545,000
1941	312,592,000
1940	122,835,000

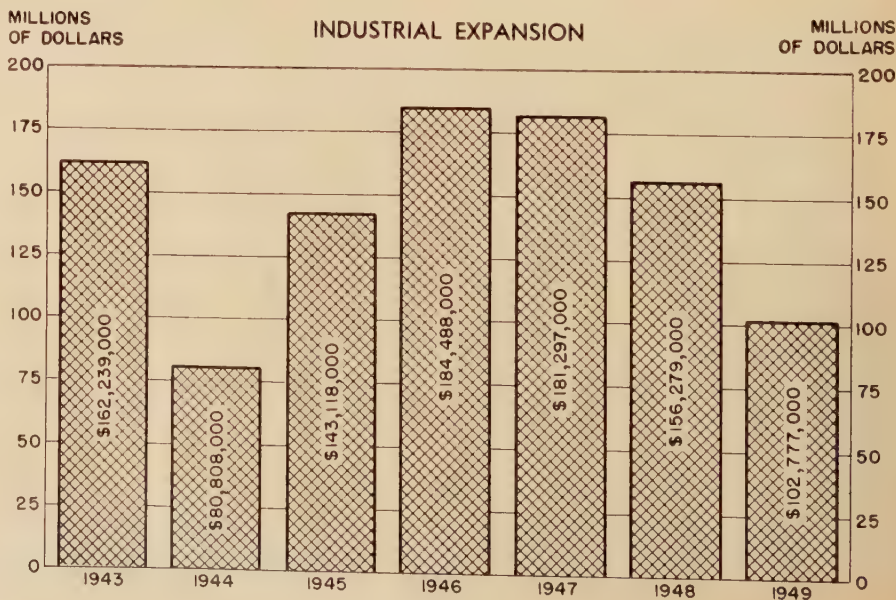
Total\$2,015,988,000

In home building, the year 1949 was also noteworthy for it saw the Chicago metropolitan area reverse a 7.7 per cent decline of the prev-

ious year. Residential construction in the area reached a new postwar high during 1949, increasing 22.6 per cent over the previous year, compared with a nationwide increase in home construction of only nine per cent.

During the decade of the 'forties the largest amount of plant and equipment expenditures was channeled into facilities erected in connection with the war effort. The most significant thing about this emergency expansion, however, was the fact that the Chicago area utilized its \$1,166,970,000 worth of government financed war-built facilities more completely in peacetime than did any other major industrial area. Investment in plant facilities since the war has amounted to \$662,976,000.

The dollar volume of funds invested in plant facilities in the Chicago industrial area declined 33 per cent in 1949 over 1948, reflecting a similar decline in such investments throughout the nation. The value of all industrial investments in 1949 amounted to \$102,787,000, compared with \$156,279,000 in 1948. ("Industrial developments" include expenditures for construction of new plants and for construction of additions to existing plants, as well as the acquisition of buildings or land for manufacturing purposes.)





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NEW AND EXPANDING INDUSTRIAL PLANTS IN THE CHICAGO INDUSTRIAL AREA, 1949-1948

	New Factories		Factories Expanding		Value of Expansion Programs and New Factories	
	1949	1948	1949	1948	1949	1948
January	8	4	23	22	\$ 6,432,000	\$ 12,126,000
February	10	11	18	24	10,125,000	15,527,000
March	7	7	32	26	11,079,000	12,273,000
First Quarter	25	22	73	72	\$ 27,636,000	\$ 39,926,000
April	11	9	22	22	\$ 6,759,000	\$ 5,848,000
May	4	5	22	22	7,567,000	7,762,000
June	4	9	20	17	11,158,000	9,638,000
Second Quarter	19	23	64	61	\$ 25,484,000	\$ 23,248,000
July	8	14	25	20	\$ 7,813,000	17,164,000
August	5	3	21	20	6,819,000	8,653,000
September	9	7	17	23	14,161,000	25,406,000
Third Quarter	22	24	63	63	\$ 28,793,000	\$ 51,233,000
October	6	5	16	23	\$ 5,843,000	\$ 16,548,000
November	4	6	31	21	8,258,000	15,907,000
December	7	10	24	28	6,763,000	9,417,000
Fourth Quarter	17	21	71	72	\$ 20,864,000	\$ 41,872,000
YEAR	83	90	271	268	\$102,777,000	\$156,279,000

During the year, 354 individual projects were initiated, compared with 358 in 1948. This decline of only one per cent in the number of projects launched indicated, of course, that almost as many companies instituted expansion steps in 1949 as in 1948, but the expansion programs tended to be less ambitious.

Of the 354 projects announced during the year, 83 involved new plants, 116 involved expansions of existing facilities, 145 were acquisitions of buildings for manufacturing or industrial warehouse purposes, and 10 involved purchases of land for future industrial use. Forty-eight of the projects were undertaken by firms new to the Chicago area.

The more important new plant developments in the Chicago area during 1949 are itemized at the end of this section.

Home Building Gained

Meanwhile, the Chicago area's accelerated home building pace last year was reflected in the fact that building permits were issued for 27,776 residential units, compared with 22,656 in 1948, 24,570 in 1947, 18,048 in 1946 and 11,130 in 1945. Nationally as well, home building reached a record 1,019,000-unit level in 1949, compared with 931,900 units in 1948 and 849,000 units in 1947. Chicago's share of the nation's home building boom

amounted to 2.7 per cent in 1949, against 2.4 per cent in 1948. The total cost of residential construction in Chicago last year amounted to \$235,137,000, against \$196,196,000 in 1948.

As might be expected, the great bulk of home construction in the area was concentrated in Chicago's mushrooming suburbs. The Chicago Metropolitan Home Builders Association estimates that only 7,000 of the 27,776 units built in the area in 1949 were erected within the city proper.

Some Decline Expected

Residential building is expected to show a decline in 1950, though by no means a serious one. Government estimates place total residential construction at 900,000 units in 1950, of which 830,000 to 840,000 are expected to be privately financed.

Meanwhile, however, an increase in public construction is expected to take up some of the slack resulting from diminished private building. It is estimated that 60,000 public housing units will be erected in 1950.

The Federal Housing Administration has issued commitments for \$94,000,000 worth of multiple type projects in Chicago, although only \$55,000,000 are already under way.

Some impetus to home building was provided last year by a five per cent decline in building

costs. Builders report, however, that prices are likely to rise again, rather than fall in 1950.

Among the new plants were the following: Benjamin Moore and Company, a large plant in Melrose Park for the production of paints; Cities Service Oil Company, an oil compounding plant on a 42-acre site on Cicero Avenue; Woodall Industries, a plant for fibreboard fabrication in Skokie; Burny Brothers, Inc., a large bakery plant at Chicago and Kilpatrick Avenues; Shulton, Inc., a plant in Lincolnwood for its line of toilet preparations; Ceco Steel Products Corporation, a new plant in Cicero; Catalin Corporation, a plastics materials plant in Calumet City; Lenc and Smith, a plant in Cicero for woodworking operations. Other new developments: Union Welt Corporation, a new plant on West Roscoe Street; Sauerman Brothers, Inc., a plant in Bellwood; Farley Manufacturing Company, a 20,000 square foot candy plant in Skokie; Universal-Cyclops Steel Corporation, a large warehouse-type building at Karlov and Parker Streets; Lanteen Medical Laboratories, Inc., a large building in Evanston; Campbell Products Company, a new plant in Bensenville; S. & C. Electric Company, a one-story brick building on North Ridge Avenue; E. H. Sargent and Company, a plant on West Foster Avenue; Formfit Company, a large plant at the corner of Roosevelt Road and Laramie Avenue; Renard Linoleum and Rug Company of St. Louis, a large warehouse structure on West 31st Street; Central Waxed Paper Company, a plant at 5070 West Roosevelt Road; Northern Steel Company, a plant in Melrose Park. Cargill, Inc. has started work on one of the largest grain elevators in the middlewest at Lockport.

Companies That Expanded

Among projects involving the construction of additional plant facilities were those announced by: Sunbeam Corporation, two large units at its west Roosevelt Road location; Pullman Standard Car Manufacturing Company, two buildings at its south side works; Carnegie-Illinois Steel Corporation, a new sintering plant at its South Works and another at its Gary

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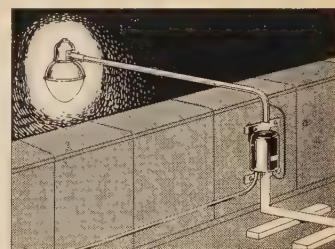
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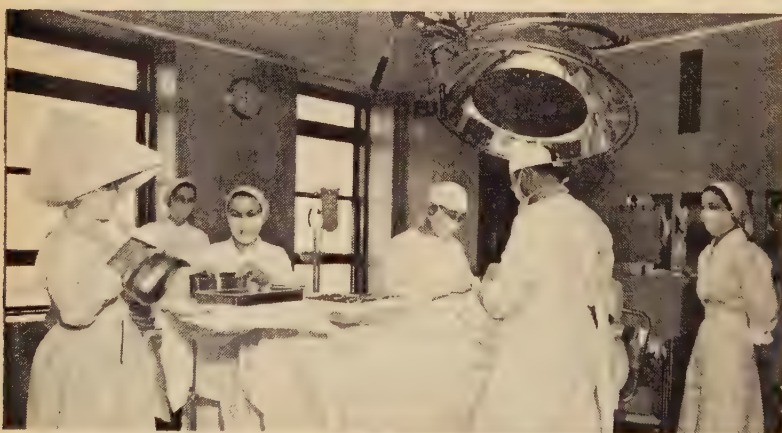
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Works, plus an addition to its Gary Sheet and Tin Mill; Youngstown Sheet and Tube Company, expansions at its East Chicago works; and Abbott Laboratories, two large additions in North Chicago. Other plant expansions were announced by National Container Corporation, Motorola, Inc., Corn Products Refining Company, Container Corporation of America, Rock-Ola Manufacturing Corporation, Illinois Tool Works, Clayton Mark and Company, Hearst Publishing Company, Lever Brothers, U. S. Steel Products Company, Benjamin Electric Manufacturing Company, Grasselli Chemical Division of E. I. Du Pont de Nemours and Company, Inc., Great Lakes Spring Corporation, Electro-Motive Division of General Motors Corporation, and Hansell-Elcock Company.

Purchases of land for future industrial use were recorded by ten companies in the Chicago area during the year. Among these were Shell Oil Company, a 73-acre site in Bedford Park for future development as a blending plant; Barker Chemical Company, an 18-acre site lying partially in Dolton and partially in the city of Chicago; Powers Regulator Company, 18 acres in Skokie; and Spraying Systems, Inc., a site in Bellwood.

Plants Purchased

Among firms which purchased existing plants for manufacturing purposes were: Sterling Bolt Company, which acquired the large one-story building at Lake Street and Kilpatrick Avenue formerly occupied by Mills Industries; McGraw Electric Company, Toast Master Division, a large building in Elgin for expanded operations; Wells Gardener Company, a 126,000 square foot property at the corner of Schubert and Kildare Avenues; B. F. Gump Company, a 70,000 square foot plant on South Cicero Avenue; Richardson Company of Melrose Park, a large building in Aurora; Persolite Products, Inc., a plant in Joliet; Storkline Furniture Company, a 50,000 square foot plant adjacent to its Kostner Avenue works; Borden Company, a 120,000 square foot building on South Kilbourne Avenue; Mills Envelope Company, a building on North Oakley Avenue; Skelly Oil Company, a two-story building on

37th and Ashland Avenue; Illinois Grain Terminals Company, a 2,500,000 bushel grain elevator at 107th Street and the Calumet River; Continental Foundry and Machine Company, a war plant which it operated during World War II; R. R. Donnelley and Sons Company, a multi-story plant at Calumet Avenue and 21st Street; Calumet Harbor Terminals, Inc., the ship yard property of Pullman Standard Car Manufacturing Company at 130th Street and the Calumet River; Packers Terminal and Warehouse Corporation, a 330,000 square foot building in Union Stock Yards; United Packers, Inc., a plant adjacent to its 37th Street unit; Shelley Steel Corporation, a multiple story building on North Branch Street; Ace Hardware Corporation, 200,000 square feet of floor area in Blue Island.

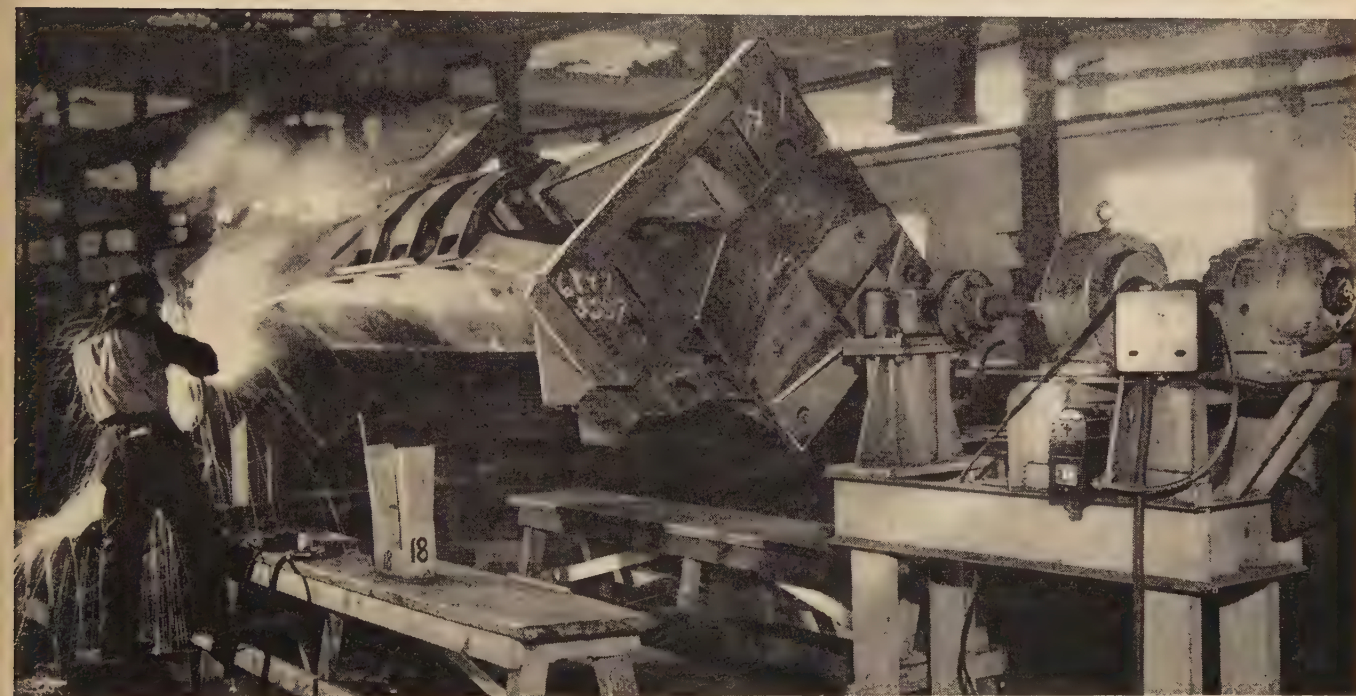
New Companies

Among these plants were several which were either newly organized concerns or were established by companies moving in from outside the industrial area: Catalin Corporation of America, one of the nation's oldest plastic material companies, which is establishing its first Chicago area plant on the Calumet River in Calumet City; Northern Steel Corporation, a newly organized steel fabricating company building a plant in Melrose Park; Bert Mills Company established in Lombard for the manufacture of coin-operated coffee vending machines; Eton Chocolates, Inc. newly organized candy manufacturer; Scovill Manufacturing Company, brass goods manufacturers, erected its first Chicago manufacturing facility; James Lees and Sons Company of Bridgeport, Pennsylvania, manufacturer of carpets and yarns, erected a building on West 51st Street; Packers Terminal and Warehouse Corporation was newly organized to operate a large warehouse for the packing industry, located at the Stock Yards; Solar Steel Corporation of Cleveland purchased a large one-story building on South Oakley Avenue; David E. Kennedy, Inc. of Brooklyn, New York, established its first Chicago plant with 50,000 square feet for the building it purchased on South Kolin Avenue.

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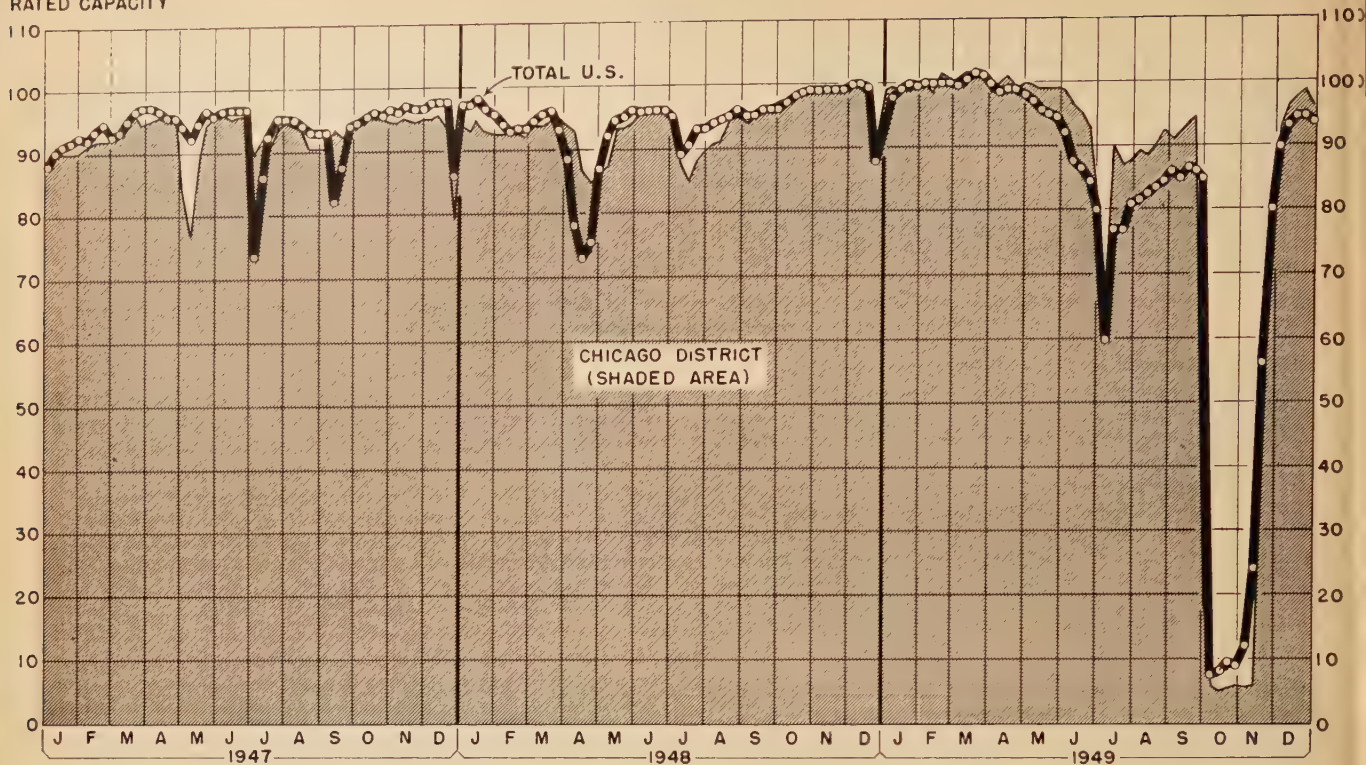
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PERCENTAGE OF
RATED CAPACITY

WEEKLY STEEL OPERATING RATE

PERCENTAGE OF
RATED CAPACITY

Chicago Takes U. S. Lead In Steel

IN 1949 the Chicago industrial area became the nation's leading steel producing center, a distinction which it had approached, but never quite attained before. Oddly, the title of steel center of the world was won not upon the basis of increased capacity but rather by attaining an above-average operating rate with limited production facilities. Actually, Pittsburgh continues to outstrip Chicago in steelmaking capacity by a significant margin, but last year Chicago marked up a 5.9 advantage in operating rate over the Pennsylvania steelmaking center.

Factors Aiding Chicago

Steelmaking operations in the Chicago district averaged 84.0 per cent in 1949; Pittsburgh produced at only 78.1 per cent of its capacity. The national average was 81.4 per cent.

The factors which operated to the advantage of Chicago were the growing importance of this mid-western area in metalworking di-

versification and consumption, initiation in late 1948 of the f.o.b. mill pricing system, the steady increase in freight rates, Chicago's favorable location transportation-wise, and a mild business recession in the second and third quarters of 1949.

More steel is consumed in the Chicago area than is produced here, and when demand is tight, significant tonnages are purchased outside. Consequently, in periods when steel demand drops below supply, as occurred in mid-1949, and business falls off, buyers seek to order their steel from the mills closest at hand. High transportation costs from distant points are avoided whenever possible. For these reasons, Chicago steel plants experience demand which keeps operating rates at a high level—rates which are higher than for some other important districts and the country as a whole.

Production of steel ingots in the Chicago district during 1949 totaled 15,282,967 net tons. This

was 1,983,077 tons, or 11.5 per cent, less than the 17,266,044 tons made in 1948. As a matter of fact, in only one year of the past eight has the district had a lower output. Comparative figures are 16,461,821 tons in 1947, 13,640,000 in 1946, 16,464,000 in 1945, 18,090,000 in 1944, 17,882,000 in 1943 and 17,665,000 tons in 1942.

Ingot Production Rate

Average weekly ingot production rate for the Chicago district last year was 84.0 per cent, as compared with 81.4 per cent for the United States. Corresponding figures for previous years were 93.7 and 94.1, respectively, in 1948; 92.6 and 93.6 in 1947; 74.0 and 72.3 in 1946; 91.1 and 86.3 in 1945; 100.0 and 97.1 in 1944; 99.5 and 98.5 in 1943; and 102.8 and 98.1 in 1942. This index is calculated by STEEL Magazine at the beginning of each week as the ratio of scheduled production to rated capacity.

A tabulation of weekly operating rates for the Chicago district



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and the United States during 1949 follows:

STEEL INGOT PRODUCTION— 1949

Per Cent of Rated Capacity

Week Ended	Chi-cago	U.S.	Week Ended	Chi-cago	U.S.
Jan. 8	99.0	97.5	July 9	67.5	60.0
Jan. 15	99.5	99.0	July 16	90.0	77.0
Jan. 22	98.5	100.0	July 23	87.0	77.0
Jan. 29	98.5	99.5	July 30	87.5	81.0
Feb. 5	99.5	100.0	Aug. 6	89.0	81.5
Feb. 12	100.0	100.0	Aug. 13	88.5	82.5
Feb. 19	98.5	100.0	Aug. 20	90.0	83.5
Feb. 26	101.5	100.0	Aug. 27	92.5	84.5
Mar. 5	100.5	99.5	Sept. 3	91.0	86.0
Mar. 12	100.5	100.5	Sept. 10	92.0	85.0
Mar. 19	101.5	101.5	Sept. 17	93.5	86.5
Mar. 26	101.0	101.0	Sept. 24	94.5	86.0
Apr. 2	101.0	100.0	Oct. 1	91.0	85.0
Apr. 9	98.5	98.5	Oct. 8	6.0	7.5
Apr. 16	100.0	99.0	Oct. 15	5.0	8.0
Apr. 23	101.0	99.0	Oct. 22	5.5	9.5
Apr. 30	99.0	98.0	Oct. 29	6.0	9.0
May 7	100.0	97.0	Nov. 5	5.5	12.0
May 14	99.5	95.5	Nov. 12	6.0	24.0
May 21	99.0	95.0	Nov. 19	45.0	56.0
May 28	99.0	94.5	Nov. 26	79.0	80.0
June 4	99.0	92.0	Dec. 3	92.5	89.5
June 11	98.5	87.5	Dec. 10	96.5	93.0
June 18	96.5	86.5	Dec. 17	97.5	94.5
June 25	95.5	84.5	Dec. 24	98.5	94.5
July 2	92.5	80.0	Dec. 31	96.0	93.5

Year's Average _____ 84.0 81.4

Source: STEEL MAGAZINE.

Peak production rate in the Chicago district in 1949 was 101.5 per cent in the weeks ended Feb. 26 and March 19. Top for the country was 101.5 per cent in the week ended March 19. Lowest in Chicago was 5 per cent in the week ended Oct. 22 and bottom for the United States was 7.5 per cent in the week ended Oct. 8. These two minimums were incurred during the almost complete paralysis caused by the month-long steel strike.

Steel produced in the United States in 1949 was the third highest in history for a year free of war

or the influence of war. It might easily have been second had it not been for the close to 10 million tons lost by the fourth quarter steel strike. According to the American Iron and Steel Institute, steel ingot output amounted to 77,860,943 net tons, a loss of 10,648,140 tons, or 12 per cent, from the 88,509,083 tons of 1948. The latter was the peacetime record and was only 1,132,517 tons below the wartime peak of 89,641,600 tons in 1944. The 1949 production was the lowest since the 66,602,722 tons in the first postwar year 1946 and compares with the 84,894,071 ton showing of 1947.

Effect of Steel Strike

Because of the steel strike, the country's steelmaking facilities were operated last year at an average of only 81.0 per cent. Corresponding rates were 93.9 in 1948 and 93.0 in 1947.

The 15,282,967 tons of steel made in the Chicago district in 1949 accounted for 19.6 per cent of the country's total. This performance agrees closely with the capacity relationship. As of Jan. 1, 1949, the Chicago district was credited with 18,280,000 tons, or 19.0 per cent, of the United States total of 96,120,930 tons. On the basis of these beginning-of-the-year capacity figures, the Chicago district produced steel at the rate of 83.7 per cent, as against 81.0 per cent for the country as a whole.

Thus, 1949 restored a pattern which had existed prior to 1947, namely, that the Chicago district production rate exceeds the national rate by from 1 to almost 5 points. The margin in 1949 was 2.7 points. In 1947, Chicago had

PIG IRON PRODUCTION

(Net Tons)

	1949		1948	
	Chicago	U.S.	Chicago	U.S.
January	1,180,036	5,731,517	1,032,518	5,195,758
February	1,077,667	5,226,465	972,352	4,838,032
March	1,202,081	5,816,521	1,009,563	5,019,697
April	1,141,804	5,531,664	882,615	3,840,398
May	1,160,647	5,516,606	1,040,067	5,077,168
June	1,065,425	4,818,918	1,020,285	4,990,501
July	939,717	4,173,311	974,103	4,899,929
August	999,617	4,476,917	1,088,394	5,263,212
September	967,932	4,350,347	1,075,099	5,217,624
October	135,492	611,591	1,146,866	5,512,205
November	475,952	2,721,771	1,157,756	5,399,278
December	1,050,232	5,230,715	1,179,431	5,595,048
Total	11,396,602	54,206,343	12,579,049	60,848,840

Source: American Iron and Steel Institute.

fallen behind national by 3.7 points, and in 1948 the rates were identical. The factors, partly national and partly local, causing the reversed showings of the two years were not applicable last year.

As stated previously, the Chicago district's annual steelmaking capacity as of Jan. 1, 1949, was 18,280,000 net tons. This figure is derived from listings prepared by the American Iron and Steel Institute. This was 126,800 tons less than was available on Jan. 1, 1948, and was accounted for principally by the sale and removal from the district of 120,000 tons of idle, government-owned electric furnace capacity in East Chicago, Ind., and to a minor degree by reappraisal of capacities in two established plants.

According to the American Iron and Steel Institute, 3,271,870 tons of new ingot capacity was added to national capacity last year to push the total to 99,392,800 tons as of Jan. 1, 1950. Meanwhile, Chicago capacity remains unchanged from the beginning of 1949. Thus, for the present year, the Chicago district can claim only 18.4 per cent of the country's ingot capacity. Incidentally, Chicago capacity consists of 16,592,400 tons of open hearth, 830,000 tons of bessemer and 857,600 tons of electric steel.

Tops Rest of World's Total

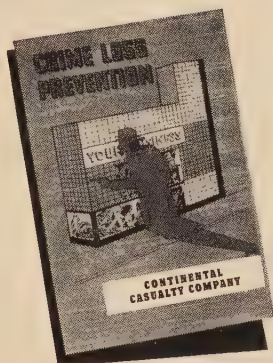
In passing, it is of interest to note that the United States ingot capacity is not only a new record high, but is about 11 million tons above the combined production of all of the rest of the world last year. The capacity increase during 1949 was the second largest in any year since 1940 and was substantially higher than expected under plans reported one year ago. With the large increase, steelmakers have raised total capacity nearly 18 million tons since 1940. This is an increase of almost 22 per cent since 1940, while population of the continental United States has gained about 15½ per cent.

Only expansion in Chicago district ingot-making facilities in prospect currently is that announced more than a year ago by Inland Steel Co. The company's capacity, now 3,400,000 tons a year, will be boosted to approximately 4,000,000

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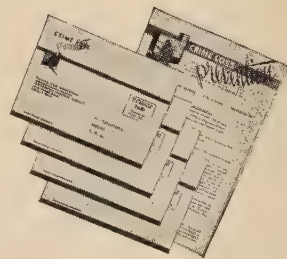
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tons, when the program is completed late this year or in 1951. The increased capacity will be accomplished by enlarging existing open-hearth furnaces, rebuilding and strengthening buildings in which they are located, installing heavier equipment such as chargers, cranes and ladles, and by expanding use of oxygen in open hearths.

10,000,000 Ton Strike Loss

It was stated previously that about 10 million tons of steel production was lost by the steel strike starting Oct. 1 and continuing upwards of a month. It might not be accurate to say that all of this amount of steel would have been made had no strike occurred. By midyear, output of steel was catching up with consumer demand and the weekly operating rate began a downward drift. At this point, buyers of steel stepped up their tempo in fear of a long-threatened crippling strike which might reduce or cut off supplies. Three times the strike was averted by last-minute postponement. During this period, steelmaking operations received artificial support from the

inventory buying movement. This advanced production partially cushioned the shock of the strike, but prolongation of the shutdown created steel shortages which assured high production rates during closing weeks of the year.

Throughout 1949, and for the first time since end of the war, steel-making was little affected by raw materials shortages. Scrap and iron ore was available in adequate quantity and quality. Enough coke also was produced although quality was impaired by the restricted mining operations enforced by John L. Lewis. Coal was not always available in grades to accommodate customary blending.

For 1950, prospects are that steel ingot production probably will be between 72 and 78 million tons, with steelworks operations averaging between 75 and 82 per cent of capacity. The year started with a bang and first two months saw many of the metalworking industries operating at near capacity. This has had the earmarks of a replacement boomlet to make up for production lost in last autumn's steel and coal strikes.

It has been expected that possibly around the beginning of second quarter production would catch up with demand. This would be the point at which the deferred effects of the steel strike, the income lag of the fourth quarter will begin to be felt, with buyers becoming more cautious and production slipping. Now it appears that this turndown may come a little later because of the interference which the coal mining crisis has inflicted on steel production so far in 1950. Coal is the sole raw material shortage which will threaten steelmaking this year.

Overcorrection Predicted

Likely the decline will be more than actually is justified and will be recognized as an overcorrection early in the summer. Chances are good that production then will recover substantially, although probably not to the boom level of the first quarter. The foregoing forecast is predicated on no war in 1950, no prolonged industry-wide strikes, no dollar devaluation or other now unforeseeable inflationary actions of the government.

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Output of pig iron and ferroalloys in the United States and the Chicago district declined sharply—10.9 and 9.4 per cent, respectively—in 1949 as it gave support to steel-making operations. An accompanying table shows monthly production statistics for 1949 and 1948.

United States production of pig iron and ferroalloys last year was at 76.8 per cent of capacity, while Chicago was at only 72.8 per cent. Chicago district blast furnace capacity of 15,655,390 tons as of Jan. 1, 1949, represented 22.2 per cent of national capacity of 70,541,850 tons. Chicago's share of national capacity has been increasing gradually in recent years. It was 20.9 per cent in 1946, rising to 21.4 in 1947 and 21.8 in 1948. Conversely, Chicago's proportion of national production for the past three years has fallen slightly behind the district's capacity position. In 1949, the district made 21.0 per cent of national output, compared with 20.7 in 1948 and 21.2 per cent in 1947.

The explanation for this probably is two-fold. First, the Chicago district possesses 3.2 percentage points more of the nation's pig iron capacity than steel ingot capacity, thus a lower blast furnace operating rate provides sufficient hot metal for steelmaking requirements. Second, Chicago's steel-making facilities are newer and more modern than those of the country as a whole and therefore are less dependent on blast furnace hot metal than scrap. A further contributing factor was that Chicago, an important supplier of pig iron to foundries, experienced a lessened demand for this product from that quarter in 1949.

Blast Furnace Capacity

The American Iron and Steel Institute reports that as of Jan. 1, 1950, United States blast furnace annual capacity amounted to 71,497,540 net tons, an increase of 955,690 tons over 1949. Chicago district capacity for beginning of this year has not been announced, but expansion made in 1949 is known to have increased it about 242,000 tons to a total of approximately 15,897,000 tons. On this basis, the Chicago district would continue to have 22.2 per cent of national capacity.

The Chicago district increase in blast furnace capacity just noted resulted from Carnegie-Illinois Steel Corp. rebuilding and enlarging its No. 4 stack at the Gary Steel Works. Ironmaking capacity of the furnace was increased from 800 to 1500 tons per day. Work was completed late last year, but the unit did not resume production because of the shaky coal situation.

U. S. Pressure Unjustified

At the start of 1949, with critical steel shortages, fresh on the minds of consumers and politicians, the steel industry was still being criticized for not having expanded its facilities substantially and quickly. Cool heads notwithstanding, President Truman was disposed to press the point and in his State of the Union address in January of last year suggested that the government participate in steel expansion. Congress did not look into the matter and in view of what developed supply-demand wise and the sizable expansion which the steel industry completed last year and has projected for the future, the Presi-

dent made no mention of the subject in his 1950 State of the Union message. Experts are of the opinion that company expansions have more than kept pace with the increase in demand for steel and that there is not likely to be any continued tightness in supply of most products as long as steel-makers are unimpeded in their production.

It is reported by the American Iron and Steel Institute that the steel industry spent \$510 million last year in expansion and improvements, this expenditure being the second highest in the history of the industry and topped only by the \$583 million in 1948. The 1949 outlay raised the industry's total postwar expenditures for expansion and improvement to \$1.9 billion. The Institute states that steel companies contemplate spending \$468 million for the same purpose during the current year.

A substantial share of these expenditures are in the Chicago district. A few of the projects al-

(Continued on page 104)

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The fleet shown above carries bulk and sack cement to dealers and road contractors throughout the lower peninsula of Michigan. Truck loads average from 18 to 24 tons for the Davis Cartage Co. fleet, Saginaw, Michigan.

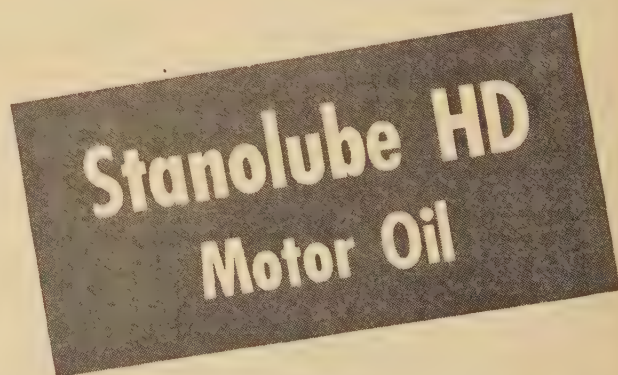
Despite this punishing service, five trucks have gone well over 190,000 miles without need of major overhaul. The other 25 units have travelled over 100,000 miles with only a minimum of maintenance.

The owner of this fleet credits effective lubrication by Stanolube HD for the remarkable performance of his truck engines. He reports that since the switch to Stanolube HD, in 1946, engine life has increased 40%.

Outstanding fleet performance, like this, is your best indication of the superior lubricating qualities of Stanolube HD Motor Oil. Here are *actual* benefits—increased engine life and reduced overhauls—gained through cleaner and more pro-

tective lubrication by Stanolube HD. A Standard Oil Automotive Engineer will help you obtain similar benefits.

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STANDARD OIL COMPANY (INDIANA)





Local refineries, such as the Whiting plant of Standard Oil (Ind.), handled a total of 148,330,000 barrels of crude

Oil Industry Boosts Capacity

THE petroleum industry in Chicago enjoyed a year of near-record demand for most of its main products in 1949 and one of peak consumption of its largest seller, gasoline.

While motorists were giving the industry a 'booming year of gasoline sales, unseasonably warm weather cut sharply into demand for fuel oil. Gasoline sales in the Chicago area, as in the nation, rose approximately 6 per cent from 1948, but fuel oil sales were down 9 per cent in the area and off 10 per cent in the U. S.

Estimated fuel oil sales in the Chicago area totaled 20,640,000 barrels in 1949, compared with 22,720,000 barrels in 1948, while on a national basis, fuel oil sales declined to 760,000,000 barrels from 846,780,000. Gasoline sales in the area were estimated at 1,273,000,000 gallons last year against 1,200,562,500 gallons the preceding year.

New High In Gasoline Sales

Nationwide sales of gasoline, sparked by an increasing number of automobiles on the roads and increased driving per car, boomed to 37,650,000,000 gallons in 1949 from 35,510,580,000 a year earlier.

The year 1949 was one of growth for the petroleum industry in the Chicago industrial area. While the number of refineries remained at

ten, the catalytic cracking capacity was increased 11,000 barrels daily by the addition of new facilities. At year end the catalytic cracking capacity of the ten refineries was 129,500 barrels daily, compared with 118,500 barrels in 1948.

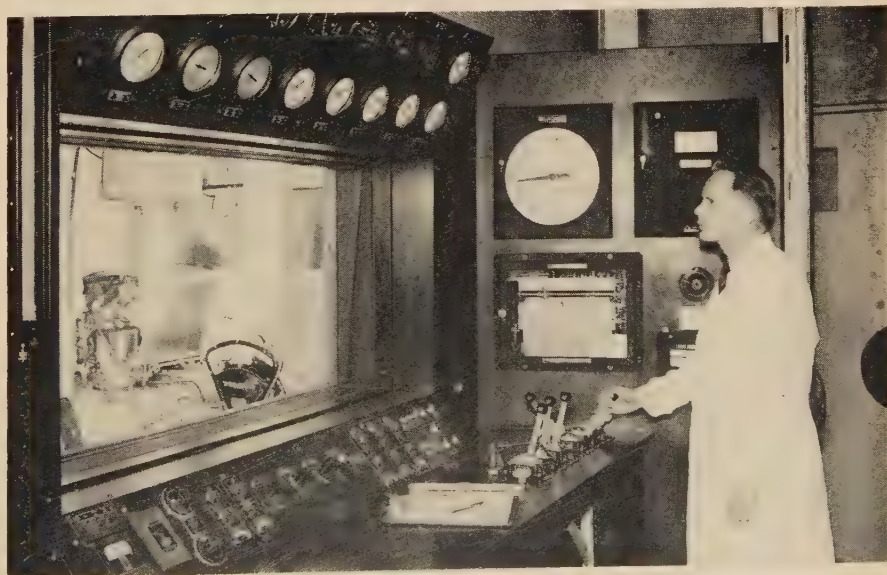
Net Increase — 8,000 Barrels

Retirement of older facilities left the area plants with a total daily refining capacity of 428,800 barrels daily, against 420,800 the year before. Newest of the Chicago area facilities, put into operation in late 1949, was the fluid catalytic

cracking unit at the Lemont, Illinois refinery of Globe Oil and Refining Company.

Globe's new \$2,500,000 fluid "cat cracker" has a design capacity of 6,000 barrels a day and replaced a heavy oil thermal cracking unit of similar capacity. The flexibility of the new unit has enabled Globe to increase the yield of domestic burning oils and diesel fuels for which there is increasing demand.

Crude oil runs to refineries were down 2 per cent in Chicago area refineries last year, while in the



Chicago is the U. S. center of petroleum research. Scene in Universal Oil Products Laboratory

U. S. runs were down 5 per cent. Estimated crude runs in the Chicago area amounted to 148,333,000 barrels last year, compared with 152,089,000 barrels the prior year. In the U. S., crude runs declined to 1,939,000,000 barrels from 2,047,700,000 barrels in 1948.

Total Demand Up Slightly

Aggregate demand for the industry's four main products, gasoline, kerosene, light fuel oil and heavy fuel oil, was fractionally higher last year. The gain was entirely due, however, to record sales of gasoline, inasmuch as the three other principal products showed

declines of 2 to 8 per cent from 1948. Oil product demand in 1949 followed the general seasonal pattern characteristic of the industry but the downward and the upward fluctuations were sharper than they have been for the past three years.

Total demand for the four products started down in January, 1949, and reached the low point for the year in mid-June. In November, demand spurted up sharply through the middle of December, when it began to taper off.

In former years, the heaviest market for oil products came during the spring and summer, but now peak demand occurs in the

fall and winter. This change has come about with the steadying of gasoline demand throughout the year and increased demand for fuel oils in the heating seasons.

The total demand for petroleum and its products in the United States was at the rate of 6,105,000 barrels daily in 1949, compared with the all-time high of 6,129,000 barrels daily in 1948.

Diesel Fuel Sales Rise

Conversion of more and more railroads to diesel power created growing demand for diesel fuel last year. Consumption of diesel oil by 27 railroads has been estimated at 853,133,742 gallons in 1949, a gain of more than 30 per cent from 1948. A further rise in railroad diesel fuel requirements is foreseen for 1950.

Fuel oil prices were on a downward trend as were some grades of crude oil in the first half of 1949. Light and heavy heating oil prices were trimmed in most areas in the first quarter because unseasonably warm weather checked consumer requirements. This was followed by a buyers strike among fuel oil jobbers and consumers at mid-year, which prompted issuance of special summer discounts and price reductions by distributors.

The oil products market gained strength in late summer, with prices trending upward. A setback in the Chicago area occurred in August when petroleum truck drivers walked out on strike. The strike reduced gasoline deliveries to a dribble and stopped fuel oil deliveries.

Switch From Basing Point Pricing

A significant development in the industry came in September, when Standard Oil Company of Indiana announced a switch from basing point pricing to a system of local price postings determined by competitive factors in the locales it serves. Initial result of the new system was a lowering of gasoline tank wagon prices throughout the Middle West.

Several industry trends were evident in the last three months of 1949: oil burner sales were zooming as a result of strife in the coal



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mines; tank wagon prices on burning oils and kerosene were moving upward; and the industry worried that the 1949-50 heating season was going to repeat the preceding year, when fuel oil sales declined because of above normal temperatures.

Production of oil wells in the two-state region of Indiana and Illinois rose to 73,831,000 barrels in 1949 from 71,379,000 barrels in 1948 as the number of producing wells increased to 34,500 from 33,589 in 1948. Illinois is sixth among the 26 oil producing states. Production is relatively less in Indiana, but the southwestern portion of that state was the scene of greatly increased production activity in 1949.

Lead U. S. In Research

The Chicago area leads the United States in petroleum research. Four great research laboratories of major oil companies are situated in the Chicago industrial area. In addition there are refining laboratories at each of the refineries in the area, plus many smaller laboratories in the industry. Approximately 25 per cent of the research done by oil companies takes place in the area, according to the Oil Industry Information Committee.

Some 4,500 research and laboratory workers are employed by the oil industry in this area, out of a total of 15,500 in the U. S.

Oil companies in the area employ approximately 32,500 compared with the total industry employment of 1,882,000 in the U. S. Total annual payroll of the industry for 1949 is estimated at \$140,000,000 for the Chicago area, against \$5,000,000,000 for the nation.

Construction Large

The combined significance of the refining, transportation, marketing and research activities of the oil industry in this area makes Chicago one of the most important single areas in the national petroleum industry.

Several large construction projects were started or completed by oil companies in the area last year, in addition to the new "cat cracker" at Globe's Lemont plant. Cities Service Oil Co. started con-

struction of a \$4,000,000 oil compounding plant on a 42 acre site located on the East Side of Cicero Avenue. It will have a blending capacity of 23,000,000 gallons of industrial and motor lubricants annually.

Other Projects

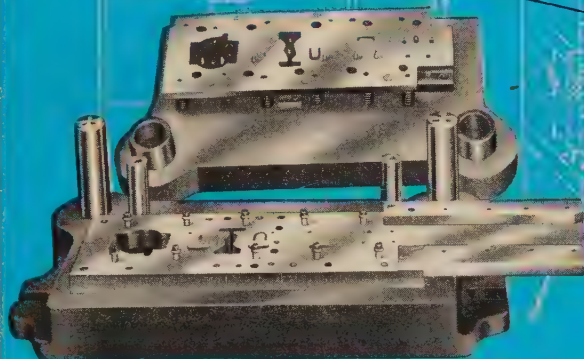
Adjoining this project on the east is the Socony-Vacuum project costing nearly \$3,000,000 and comprising a compounding and blending plant.

Standard Oil Co. built a new

high pressure laboratory adjacent to its Whiting refinery at a cost of \$100,000. At Argo, the Shell Oil Co. started building five big tanks as part of a marine storage terminal.

Adding 73,000 barrels of daily capacity to oil pipelines into the Chicago area was the new \$1,000,000 pipeline completed by the Texas Empire Pipe Line Co. last year. This pipeline will serve the Texas Co. refinery at Lockport, Ill. The Texas Co. added several new tanks to its plant at Lockport last year.

Stampings Cost Less with

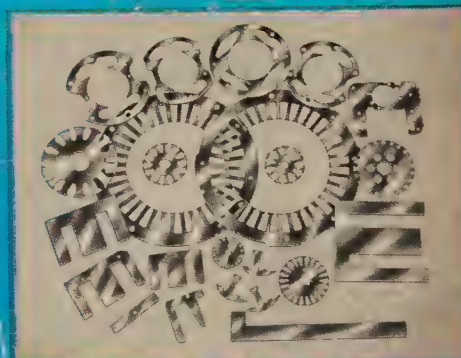


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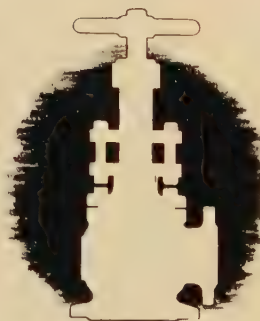


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TV Booms Electronic Industry

IN 1949 Chicago's radio and television industry took on the semblance of an express train streaking through the night—with no one knowing quite where it would turn up next morning. As television—the industrial infant that grew up overnight—swept ahead of the trade's own rosiest prophecies, even the figure-takers were pressed to maintain the box score on the nation's fastest growing industry.

A year ago, industry forecasts that 2,500,000 TV sets would be made and sold in 1949 were called pipedreams. Yet, before 1949 was out, TV makers had poured out some 2,800,000 sets and at the year-end indications were that the production momentum would carry well into 1950. Production capacity of practically all manufacturers in the Chicago area was greatly increased, with some boosting their monthly capacity as much as eight-fold between January and December 1949.

Chicago Gains 40% Of Market

The Chicago area—long a principal center of radio-TV production—captured an even greater share of the national volume in 1949. Industry estimates are that Chicago area manufacturers now account for 40 per cent of the nation's total output of radio and television receivers. In 1949, the area produced an estimated 1,242,000 TV sets, against the national total of 2,800,000, and 4,000,000 radio receivers, compared with 10,000,000 for the entire industry.

A tendency among consumers to restrict luxury buying during the early months of 1949 sent employment in the area's radio-television set and electrical component parts industry to a low of 29,100 in July. The figure is for the Chicago-Calumet area.* From that point on, however, it rose steadily, reaching

a record high of 39,800 in November. This new employment peak compared with an earlier record of 39,500 in November, 1947.

Swelling popular demand for television entertainment—particularly in the Fall World Series-football months—left most leading set makers well behind a record flow of orders in the last quarter of 1949. Later, heavy sales volume during the Winter homefurnishings market in Chicago gave the principal manufacturers an added backlog of orders as they moved into 1950. The upsurge of consumer buying led industry authorities to place 1950 production estimates at 4,000,000 sets.

Color Question Undecided

During 1949 the industry was handicapped by the controversy regarding television which caused hesitation on the part of some potential buyers. The Federal Communications Commission conducted extended hearings to determine whether either of the two color systems proposed was satisfactory and ready to be released for public use. One system is being advanced by the Radio Corporation of America and the other by the Columbia Broadcasting System. Both the FCC and the Radio Manufacturers Association have taken the position that before color telecasting may be introduced, the system employed must be "compatible"—that is, the signal must be receivable on existing black and white receivers. The commission finally shelved the color issue until 1950.

The FCC also studied the problem of opening the ultra high frequency band to provide new TV station channels. This issue was also unresolved at the year end, however, and the commission continued its ban on new station authorizations. Thus, at the end of 1949, there were 98 telecasting stations in operation, four of them in Chicago.

One distinguishing feature of Chicago's radio and television industry is the diversity of its production. Practically all products and components used in the industry are manufactured in the area, by 28 leading radio and television re-

*Defined by the Illinois Department of Labor as including Cook and DuPage counties in Illinois and Lake county, Ind.

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ceiver manufacturers and 62 major parts manufacturers.

As for 1950, the Radio Manufacturers Association forecast that TV set sales would total between \$825,000,000 and \$850,000,000 at retail, exclusive of installation and servicing charges. Radio set sales are expected to raise the industry's combined retail volume to \$1,250,000,000. If so, it will be another new record.

Component parts makers are expected to share proportionally this record 1950 business. In addition to new set demand, a replacement market of large potential has developed in TV parts. A growing proportion of set owners will be in the market for tube replacement in 1950. Picture tube sales, alone, are expected to increase to 5,000,000 units, compared with 3,500,000 in 1949.



Candy Volume Holds; Prices Dip

AMERICA'S sweet tooth was a trifle less sweet last year, and as a result Chicago's giant candy industry slipped a bit from its record-breaking 1948 sales volume. The main cause of the decline, however, was lower prices rather than an appreciable drop in consumption.

Poundage sales by confectionery manufacturers actually held close to the 1948 all-time high of 2,673,000,000, but a price decline from an average \$.375 per pound in 1938 to \$.335 per pound in 1949 tended to depress dollar totals. Poundage sales in 1949 have been estimated at 2,500,000,000 pounds by the Department of Commerce, but industry sources believe the final figures will be closer to the 1948 total.

Chicago candy makers, who have

made the city the "nation's biggest candy kettle" by out-producing every other city and state, experienced diminished volume along with other producers. Averaging a little over 29 per cent of the total value of U. S. candy manufacturers' sales, Chicago area producers sold an estimated \$246,700,000 at wholesale value in 1949, compared with \$291,800,000 in 1948 and \$275,711,000 in 1947. (These figures cover 123 manufacturer-wholesalers in Cook County, but do not include manufacturer-retailers who sell direct to the consumer.)

For the country as a whole, candy producers' sales slipped from a peak \$1,001,000,000 at wholesale value in 1948 to an estimated \$850,000,000 in 1949. The latter figure

(Continued on page 103)



Korth photo

Rail Traffic Lower; Truck And Air Volume Gains

THE year 1949 marked another important and eventful year in transportation. While railroad carloadings dropped sharply during the year, due partially to reduced coal mining operations, the motor carriers and airlines reported increases in their volume of business. Railroad equipment was ample to supply demands due to the decrease in traffic handled and increased purchases of rolling stock. Other forms of transportation were, for the most part, equipped to handle their traffic expeditiously. The Office of Defense Transportation, which was set up in 1941 as a wartime agency to police the conservation and proper utilization of transportation equipment, expired on June 30, 1949. Its two remaining orders, requiring maximum loading of railroad freight cars, were vacated at the same time.

Except for a few local strikes, typical of which occurred on the Missouri Pacific and Wabash Railroads, there were no serious labor

difficulties to plague the carriers during the year. The dispute between the railroads and the 16 non-operating rail labor unions was settled, resulting in a 40-hour work week for those employees, effective September 1, 1949. As a consequence, rules were amended by excluding Saturdays, as well as Sundays and holidays in computing demurrage free time as well as the prescribed credit periods for the payment of freight charges. It also resulted in Saturday freight house operations being generally discontinued. The railroads won a victory when an emergency board appointed by President Truman found that no need existed for the employment of an extra fireman on Diesel electric locomotives. The Brotherhood of Locomotive Firemen and Enginemen had contended that the extra crewman was necessary for reasons of safety and efficiency.

The year saw the enactment of legislation establishing a uniform two year time limit for the recovery

of overcharges and undercharges by or against railroads, motor carriers, water carriers and freight forwarders. Such federal legislation was signed by President Truman on June 29, 1949 and the Illinois law was signed by Governor Stevenson on July 20, 1949. Still pending in Congress is legislation which will permit a seller, acting independently, to quote or sell at delivered prices and to absorb freight charges providing there is no combination, conspiracy or collusive agreement or any monopolistic, oppressive, deceptive or fraudulent practice carried out by or involving the use of delivered prices or freight absorption. The proposed law is designed to clarify the position of business as a result of the Supreme Court's rulings, in the Steel Conduit and Cement Institute cases, that freight absorption and delivered prices violate the anti-trust laws.

The carriers look forward to 1950 with optimism. Industrial employment and production are at high levels and these, together with our commitments abroad, should spell a prosperous year for our transportation agencies. However, un-

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favorable international affairs or unforeseen developments in our own economics could materially change these favorable prospects.

RAILROADS

ANOTHER increase in freight rates and charges, estimated at \$293 million annually was granted the railroads by the Interstate Commerce Commission. Effective on September 1, 1949, the increase, with certain exceptions, was 10 per cent on traffic within and between Eastern and Southern Territory; 9 per cent within Zone 1 of Western Trunk Line Territory; 8 per cent within Western Territory other than Zone 1 of Western Trunk Line Territory; and 9 per cent on interterritorial traffic, except between Eastern and Southern Territory where the increase was 10 per cent. The cumulative increase in freight rates since June 30, 1946 ranged from 66.3 per cent on less-than-carload traffic and 64.3 per cent on manufactures and miscellaneous carload traffic to 44.8 per cent on products of mines. The Commission also granted the Eastern railroads a 12.5 per cent increase in passenger fares which is estimated will yield the carriers an additional \$37,800,000 annually.

The Commission approved the first rate agreement application filed under the Reed-Bulwinkle Act. It was that of the Western Traffic Association filed on behalf of 112 western railroads. The Reed-Bulwinkle Act, passed by the 80th

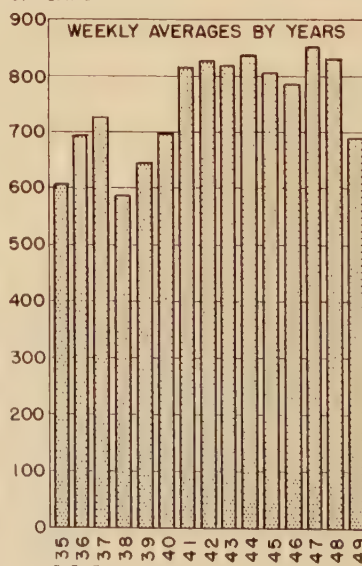
Congress over a Presidential veto exempts from the anti-trust laws carrier agreements and other joint actions relating to rates and charges when they have been approved by the Interstate Commerce Commission.

The Docket No. 28300 class rate investigation was reopened for further hearing by the Interstate Commerce Commission. The Commission at the same time submitted a scale of first class rates tentatively proposed as a substitute for the Appendix 10 scale prescribed in its original report. This proposed scale is approximately 60 per cent over the original scale. The Appendix 10 scale of rates will be used in connection with the Uniform Freight Classification which it is expected will be filed with the Commission shortly. Verified statements in the reopened proceedings were due February 28, 1950 and rebuttal evidence 30 days thereafter.

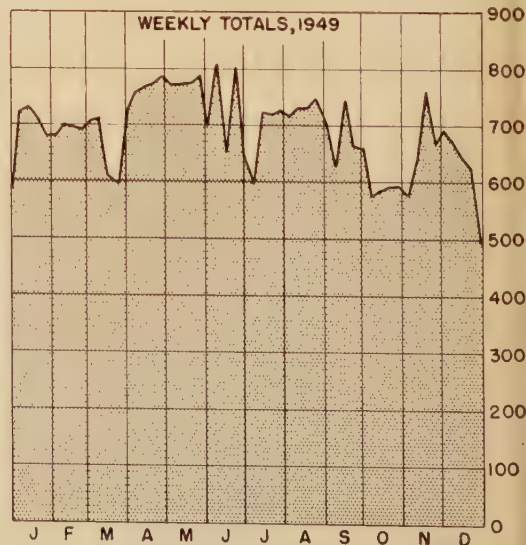
ICC Ruling

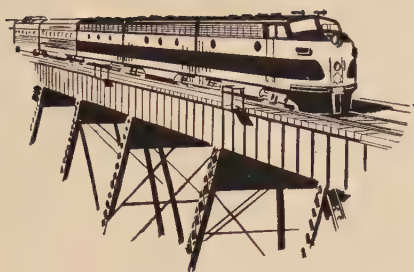
The Interstate Commerce Commission ordered the railroads and water carriers operating on the Mississippi and Warrior Rivers to establish the through joint rail-barge routes and rates which were prescribed in an earlier report. A group of some 25 railroads filed suit in Federal Court to have the order set aside, charging that it was unlawful and beyond the statutory power of the Commission. The Court upheld the Commission and the order is set to become effective.

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tain high standards of service to the public in the face of other constantly increasing operating costs.

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March 31, 1950. It is believed, how-
ever, that the railroads will appeal
the case to the Supreme Court.

The Docket No. 29770, Official
Territory less-than-carload rate in-
crease proceeding, was reopened by
the Commission on the request of
the eastern railroads. This proceed-
ing involves the carriers request
for an increased scale of rates on
less-carload traffic in Official Terri-
tory, a minimum charge of \$2.25,
a minimum rate of \$1.00 where
pick-up or delivery service is per-
formed, and the establishment of a
25 pound per package minimum
weight. Hearing in this important
case is set for February 21, 1950 in
Washington, D. C.

Hearings in the 17 government
war reparation cases against the
railroads were held in December
and recessed to March 20, 1950.
These reparation cases involve al-
leged overcharges by the railroads
of an estimated \$2 billion on gov-
ernment wartime freight. At the
December hearing, railroad witness-
es pointed out that government
freight was given preferential ser-
vice during the war although it often
moved at rates considerably below

the commercial rates. Other w-
nenses charged that payment of th-
claims would force many railroads
into insolvency and that shippers
would be unable to pay the in-
creased freight rates which would
result.

Revenue carloadings during 194-
were substantially below prediction.
During the year carloadings totalled
17,218,033 cars, a decrease of 2,468-
202 cars or 12.5 per cent under the
previous year and 2,844,713 cars or
14.2 per cent below 1947. Mer-
chandise (l.c.l.) loadings were 15.3
per cent under 1948 and 24.3 per
cent under 1947. Since coal is a
heavy moving commodity of the
railroads, the reduced mining opera-
tions during the year were in no
small way responsible for the sharp
drop in carloadings.

Service Improved

The efforts on the part of the
railroads to improve their freight
service is noted in the performance
record of package cars from Chic-
ago. Statistical reports compiled by
The Chicago Association of Com-
merce and Industry indicate that
the 70.1 per cent on-time perform-
ance of package cars leaving Chi-
cago was the best record for any
year since 1942. The decrease in
loadings of merchandise freight na-
tionally was also reflected in the
loadings from Chicago. The table
below shows the number of mer-
chandise cars forwarded from Chi-
cago by months during 1949 and
1948.

MOTOR CARRIERS

The motor carriers like the rail-
roads were confronted with in-
creased costs during the year which
necessitated further increases in
their rates and charges. Their rates
were generally lower, however, than
their railroad competitors and as a
result there was a continued diver-
sion of tonnage in their direction.

Several important decisions affect-
ing motor transportation were hand-
ed down by the Interstate Com-
merce Commission during 1949.
One of these was the order in the
Central Territory stopping-in-transit
cases wherein the Commission found
there was a necessity for the car-
riers performing at least two stops
en route between point of origin
and final destination to complete

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loading or partially unload truckload shipments. They also found that there was a necessity for the carriers providing an additional pick-up at point of origin to complete loading and an additional delivery at destination to complete unloading of truckload shipments. This decision was a long sought victory for shippers since the carriers had intended restricting stopping-in-transit service to one stop en route, to single line traffic only and to not in excess of 112.5 per cent of the carrier's shortest certificated route between point of origin and final destination.

Trucking Decision

A decision favoring the right of a shipper to transport his own goods in his own vehicles was heralded by private truck operators when the Interstate Commerce Commission affirmed its previous findings in the Lenoir Chair Co. and Schenley Distillers Corp. contract carrier application cases. The Commission held that primary business rather than compensation is the controlling factor in determining whether a carrier is engaged in for-hire or private transportation. Hearing in a similar proceeding, the Burlington Mills Corporation contract carrier case, is scheduled for February 23, 1950 in Washington, D. C. This proceeding was reopened for further hearing on the request of Trunk Line railroads.

Truck regulatory regulation was introduced in the Illinois' General Assembly but about 100 amendments by both proponents and opponents of the measure prevented the bill from being reported out of Committee before adjournment of the Assembly. The bill would have required common motor carriers to file tariffs showing their rates, fares and charges. Contract motor carriers would have been required to file contracts containing their minimum charges for transporting property within the state of Illinois.

The Interstate Commerce Commission issued an order setting up 13 rules to be observed by brokers of transportation of property by motor vehicle. The proceeding was later reopened for further hearing and the effective date of the order postponed indefinitely.

The Commission also prescribed rules to be observed by motor com-

mon carriers in the handling of C.O.D. shipments and the remitting of C.O.D. funds. Among other things, it requires a carrier to remit C.O.D. collections directly to the consignor or party designated by him as the payee within 10 days after delivery of the shipment. On interline traffic the delivering carrier must notify the originating carrier of such remittance at the time payment is made. The order is scheduled to become effective March 1, 1950.

Pending Questions

Still pending in Congress is legislation which would define freight forwarders as common carriers and permit them to enter into agreements with motor common carriers governing their utilization of the services of the motor carriers on terminal-to-terminal traffic at rates lower than the regular tariff rates. Meanwhile, the Interstate Commerce Commission postponed to March 1, 1950 the effective date of their order which would prohibit the forwarders from receiving rates for terminal-to-terminal services performed for them by the motor car-

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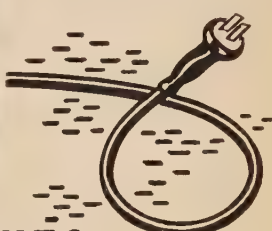
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riers which were lower than the lawful tariff rates.

The motor carriers also have several important proceedings affecting their operations carried over into 1950. Included in these are the pick-

up and delivery and small shipments cases, rules governing the lease and interchange of motor vehicles, the freight forwarder legislation and several investigation and suspension cases.

BIG GAIN FOR AVIATION

CHICAGO passed a significant aviation milestone in 1949 when it became the nation's first city to handle more than 1,000 plane movements a day. This meant that on the average a plane was landing or taking off from one of the city's three airports every 86 seconds around the clock. Chicago's air traffic exceeded by a substantial margin that of New York, its nearest rival.

In-bound and out-bound traffic at Midway (formerly Municipal) airport totaled 223,943 plane movements; the figure at O'Hare field was 134,537 and at Meigs field, 12,309. A comparison with New York's three airports (available only for the first eight months of 1949) showed that Midway and O'Hare fields handled 244,182 arrivals and departures in that period, while New York's LaGuardia, Idlewild and Newark handled only 212,038. In the eight month period, Chicago's two major fields marked up a daily combined average of 1,004 movements.

Midway airport set a new record for passenger traffic on both scheduled and non-scheduled commercial airlines. Passenger arrivals and departures on scheduled lines rose to 2,842,376 from 2,429,182 in 1948 and 2,537,412 in the previous peak year of 1947. Passenger volume on non-scheduled carriers soared to 204,317 from 135,021 in 1948.

A major reason for increased passenger travel in 1949 was the improved competitive relationship of air fares to rail rates. In addition, the airlines inaugurated a new economy service, "air coach," which gained considerable popularity.

Service available on the scheduled airlines reached a new high at Midway in 1949 as plane movements to and from the city reached 137,735, compared with 129,598 the preceding year. The non-scheduled carriers reduced the number of flights in-bound and out-bound, but their planes went out with heavier

passenger loads. Non-scheduled flights arriving and departing from Midway totaled 86,208 against 91,953 in 1948.

Although detailed breakdown of statistics is not available for O'Hare field (formerly, Douglas airport), the total 1949 traffic of 134,537 planes was believed to be somewhat in excess of 1948 volume. Traffic at O'Hare is largely military planes, including reserve and National Guard flights as well as regular military movements. The only commercial operation is by Slick Airways.

Meigs air field, the city's smallest, wound up its first year of operation on December 11, 1949, with a record of 12,309 inbound planes. Located on Northerly island, Meigs increased its daily plane landings from a low of eight to more than 60. This traffic consisted largely of small private planes, since the airport is not yet equipped to receive scheduled air carriers. Plans are before the city council to enlarge the Meigs landing strip from 2,800 feet to 4,000 feet and to add a radio control tower. In its first year of operation, Meigs yielded \$37,581 in revenue, \$9,966 more than operating expenses.

Both air mail (including air parcel post) and air freight shipments reached record levels last year, although air express shipments declined, due in part to a handlers strike in New York. In addition, some shippers switched from air express to air freight because their shipments had grown much larger.

Air mail dispatched from Midway set a new peacetime record of 13,979,832 pounds in 1949, up from 12,334,909 in 1948 and 10,023,311 in 1947. Air express shipments handled at Midway during the first eleven months of 1949 totalled 21,636,525 pounds, compared with 29,854,385 pounds in the full year of 1948.

Industry estimates are that total domestic and foreign airline passenger traffic will increase another

10 per cent in 1950, following last year's 14 per cent gain. A major gain in domestic flights traffic is expected to come for increased air coach travel. International air traffic should be exceptionally heavy to Europe, in view of the celebration of Roman Catholic Holy Year. In 1949, international air travel to and from the United States topped ocean travel for the first time.

WATER TRAFFIC

A COMBINATION of unfavorable factors—restricted coal production plus a 42-day steel strike—dropped Great Lakes freight traffic below its record 1948 level and in turn held the steady growth of Illinois waterway shipments to a minimum gain in 1949.

Traffic on the Illinois waterway to and from Chicago for the year is estimated at 12,190,000 short tons, compared with 12,109,525 tons in 1948. This increase fell somewhat short of a predicted 14,000,000-ton volume based on the past growth record of the waterway.

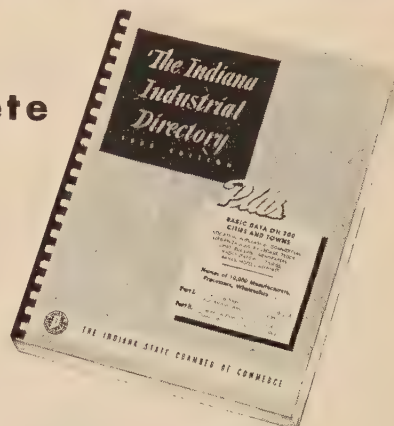
Bituminous coal shipments on the waterway declined to 4,350,000 tons in 1949 from 5,136,107 a year earlier. The traffic in a few other commodities, such as sulphur and silica sand, were also off. Iron and steel tonnage movements, however, reached 200,000 tons from 186,650 in 1948, but this too was a smaller gain than had been anticipated. Shipments of corn, wheat and oats rose to a total figure of 2,000,000 tons from 985,008 in 1948.

Great Lakes bulk shipments of both iron ore and coal were down, but were offset by heavier shipments of grain and petroleum. In 1949, the bulk fleet carried 69,556,269 gross tons of iron ore, against a record 82,937,192 gross tons in 1948. Coal cargoes were down to 40,000,000 tons from 60,563,530 in 1948. Grain shipments last year were up, however, totaling 10,900,000 tons against 9,876,880 in 1948.

The U. S. Army Corps of Engineers estimates that shipments moving through the Lockport lock aggregated 8,361,248 tons last year, compared with 8,303,149 the preceding year. Movements through the Sag canal were also improved, increasing to 2,000,000 tons from 1,750,000 in 1948.

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Korth photo
Looking south on La Salle Street — the Midwest's financial capital.

Bank Deposits Gain; Loans Decline

banks increased their holdings of United States government obligations by \$733,992,000 last year, bringing the total to \$4,353,420,000. In 1948, when reserve requirements were increased three times, holdings of government securities were cut \$252,869,000. Cash resources of all Chicago banks combined were down nearly \$99,000,000 in 1949 to \$2,263,468,000, while deposits increased \$577,068,000 to a total of \$8,617,362,000.

Credit Demand Down

The shrinkage in bank credit extended to business firms in Chicago last year reflected a declining demand for such credit as well as some tightening in the lending policies of banks.

The Federal Reserve Bank of Chicago in the June, 1949, issue of its magazine **BUSINESS CONDITIONS**, analyzed the bank-borrower relationship as it appeared at that time as follows: "In post-war years business financing has been provided largely by internal

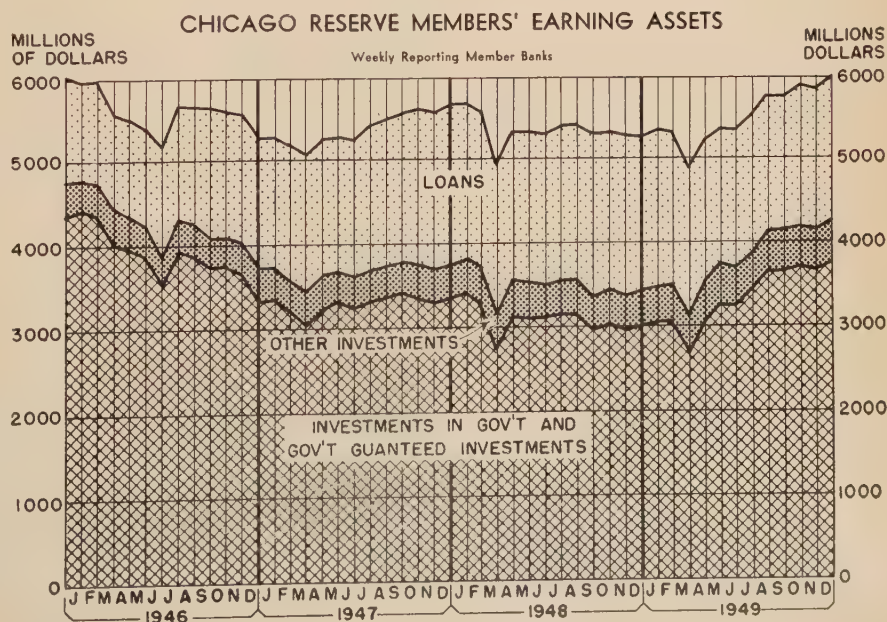
sources, i. e., retained earnings and depreciation reserves. Additional funds have been obtained on the outside from trade creditors, securities markets, insurance companies, and banks, with borrowings from the latter commonly serving as a residual source of funds for some, and especially the largest, firms.

"The requirements of business for funds have been tremendous since V-J Day. Close to 60 billion dollars have been spent for plant and equipment, and over 25 billion used to rebuild and enlarge inventories. About 61 per cent of the funds needed by corporations for these purposes have come from internal sources, and only nine per cent from banks. The remaining sources were: new security issues, 16 per cent; trade debt, nine per cent; and other, five per cent. From the close of the war to the end of 1948 commercial and industrial loans of all commercial banks in the nation increased by over 11 billion dollars. Most of this expansion of bank credit was completed by the

BUSINESS loans of Chicago banks showed further shrinkage last year despite a seasonal upturn in demand during the latter months of the year. The reduction in loans of Chicago banks, moreover, was larger than that for the country as a whole.

At the close of 1949, aggregate commercial, industrial and agricultural loans of weekly reporting federal reserve member banks in the City of Chicago amounted to \$1,259,000,000, a drop of \$228,000,000, or 15.3 per cent from the 1948 year-end total. For all weekly reporting member banks in the United States, the decline in business loans was 10.6 per cent.

Loan volume of the city's smaller banks held up better than those of the big banks that report weekly to the Federal Reserve System. Aggregate loans and discounts for all banks in the city amounted to \$1,944,756,000 at the end of 1949, a drop of \$135,787,000, or 6 per cent, for the year. In 1948 there was a gain of \$18,070,000. The



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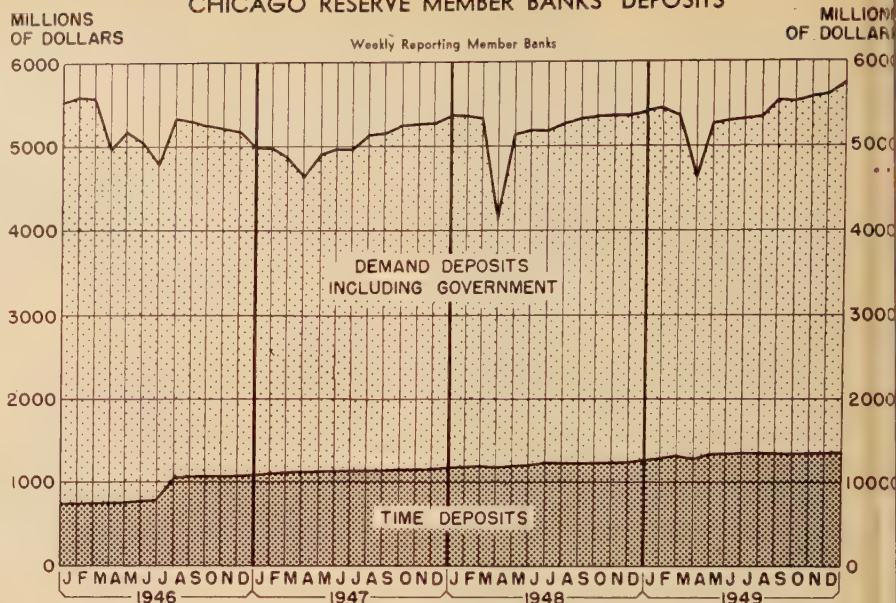


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CHICAGO RESERVE MEMBER BANKS' DEPOSITS



end of 1947, when upward price movements had begun to level and many 'pipelines' were becoming filled. New bank loans declined proportionately as a means of current financing in each of the three complete postwar years, from 14 per cent in 1946 to three per cent in 1948. . . .

The bank also noted that the demand for bank loans depends not only on the attitude of business management toward bank borrowing but also on the changes in price levels, inventory requirements, capital expenditures, and shifts in the proportions of total requirements supplied by retained earnings, security issues, or insurance companies.

The steady decline in business activity during the first half of 1949 brought an end to the fear of postwar inflation and a reversal in the tight-money policy pursued actively during 1948 by the United States Treasury and the Federal Reserve System.

Reserve Limits Cut

In contrast to 1948 when reserve requirements of member banks were increased three times to drain off some \$3,000,000,000 in excess reserves, the Federal Reserve System last year made three reductions in reserve requirements—in May, in July, and in August—to the tune of \$3,800,000,000. At the close of the year, the reserve ratio required for the central reserve city banks (New York City and Chicago) was

22 per cent against demand deposits as compared with 26 per cent at the beginning of the year. Reserve requirements for reserve city banks were down to 18 per cent from 22 per cent, while for country banks the requirement was 12 per cent as against 16 per cent at the beginning of the year. These rates were the lowest since 1941 for the reserve city and country banks. Reserves required against time deposits were cut to 5 per cent from 7½ per cent for all member banks.

Regulation W Modified

Other steps were taken to increase the availability of credit. On March 7, 1949, the Federal Reserve Board modified its Regulation W governing consumer installment credit. Maximum maturities on controlled items other than automobiles were lengthened in two steps to a uniform 24 months, as compared with 15 to 18 months previously, and minimum down payments were cut in half. The authority under which Regulation W was issued was permitted to expire on June 30. On March 30 the Board reduced margin requirements for the purchase of registered securities to 50 per cent from 75.

Implementing the new easy money policy, the Federal Reserve System made an important change in its program for the support of government bond prices. The following statement was issued on June 28:

"The Federal Open Market Com-

mittee, after consultation with the Treasury, announced today that with a view to increasing the supply of funds available in the market to meet the needs of commerce, business, and agriculture it will be the policy of the Committee to direct purchases, sales, and exchanges of Government securities by the Federal Reserve Banks with primary regard to the general business and credit situation. The policy of maintaining orderly conditions in the Government security market, and the confidence of investors in Government bonds, will be continued. Under present conditions the maintenance of a relatively fixed pattern of rates has the undesirable effect of absorbing reserves from the market at a time when the availability of credit should be increased."

Governments Jump In Price

The immediate effect of the new policy was an abrupt cut in sales of government securities by the Federal Reserve System. During the first half of 1949 the System had reduced its holdings of governments by nearly four billion dollars. These securities had been sold freely to absorb the excess funds held by banks because of lowered reserve requirements and the repayment of business loans. With the removal of this supply of securities, prices of governments increased sharply and yields were reduced proportionately. As yields on government securities declined, the returns available on loans to business presumably became all the more attractive to banks.

The Federal Reserve Banks discontinued their sales of government securities completely for only a short time. Additional securities were made available by the central

CHICAGO BANK DEBITS

(000 omitted)

	1949	1948
January	\$ 8,282,638	\$ 8,636,871
February	6,779,890	7,449,095
March	9,278,165	9,325,877
April	7,757,830	7,682,531
May	7,852,551	7,686,858
June	8,399,412	8,626,931
July	7,529,508	8,146,429
August	7,384,892	7,745,213
September	7,450,864	8,275,860
October	7,421,894	8,662,053
November	7,517,628	8,098,951
December	8,612,004	9,639,957
Total	\$94,267,276	\$99,976,626



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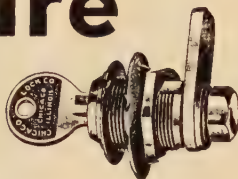
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CHICAGO BANK STATISTICS

(000 omitted)

	Loans and Discounts	Total Deposits	Cash Resources	Savings Deposits
1949	\$1,944,756	\$8,617,362	\$2,263,468	\$1,755,151
1948	2,080,543	8,040,294	2,352,243	1,697,099
1947	2,062,473	8,092,443	2,144,955	1,614,999
1946	1,721,131	7,457,141	1,928,423	1,470,306
1945	1,507,900	8,597,676	1,863,589	1,270,960
1944	1,320,483	7,688,678	1,702,045	991,688
1943	1,132,624	6,419,297	1,545,359	776,311
1942	955,789	5,719,478	1,602,189	651,641
1941	1,108,252	4,584,604	1,796,297	631,699
1940	823,713	4,177,846	1,797,187	648,921
1939	676,347	3,737,402	1,629,923	618,999
1938	619,730	3,386,161	1,432,553	574,757
1937	729,313	2,978,181	1,079,365	549,988
1936	720,089	3,142,671	1,046,594	508,177
1935	534,477	2,805,902	978,374	460,344
1934	592,796	2,322,729	816,029	398,099
1933	623,746	1,790,070	681,271	314,711
1932	731,050	1,782,513	742,441	299,041
1931	1,268,271	2,140,039	508,343	469,511
1930	1,886,712	2,896,297	668,905	663,357
1929	2,106,168	2,836,274	657,993	684,977

banks to maintain an orderly money market, and when reserve requirements of member banks were reduced in August the Reserve again sold government securities to absorb some of the funds that were freed.

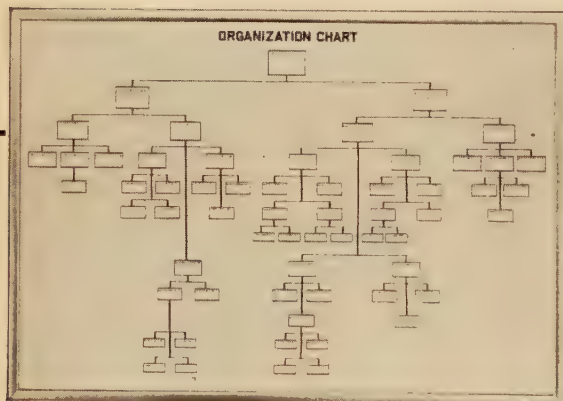
Although discount rates charged by the twelve Federal Reserve Banks on advances and discounts for member banks were increased twice in

1948 as a credit restricting measure there was no reduction in 1949 to conform with the easy credit policy. The discount rate has remained at 1½ per cent since August, 1948.

The effectiveness of Treasury and Federal Reserve action in stimulating business loans or contracting them by various means has been questioned. The June 1949, issue of BUSINESS CONDITIONS declared: "Moves by banks and supervisory authorities to retard the decline in loans have been largely ineffective historically. Final results will depend more upon decisions by borrowers." Nonetheless, in at least two categories the relaxation of credit controls has coincided fairly closely with an increase in activity. Consumer installment credit showed a contraction during the first quarter of 1949 but began to recover about the time restrictions on maximum time and minimum down payment were relaxed. Similarly, stock market prices reversed their downward trend in June, and continued upward for the balance of the year. Consumer installment credit was at a new all-time high at the end of 1949 at more than ten billion dollars.

A sidelight of interest to Chicago banking circles was the regaining of first place, in point of size, by the Continental Illinois National Bank and Trust Company. The Continental's total deposits of \$2,348,174,000 at the end of 1949 compared with \$2,278,611,000 for the First National Bank of Chicago.

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New Exchange Hits Fast Pace



Trading floor of the new Midwest Stock Exchange

THE financial independence of the Middle West was strengthened materially when on December 1, 1949, the new Midwest Stock Exchange came into being as a merger of four regional exchanges—the Chicago Stock Exchange, the St. Louis Stock Exchange, the Cleveland Stock Exchange, and the Minneapolis-St. Paul Stock Exchange. The new exchange is situated in Chicago, in the quarters long occupied by the Chicago Stock Exchange.

The launching of the new exchange occurred under particularly favorable conditions. For more than five months the trend of stock prices generally had been upward, and the volume of trading was on the rise. The Midwest exchange got off to a flying start. During the first month of its existence, trading volume exceeded the combined volume of the four predecessor exchanges in October by about 59 per cent. This compared with gains of 44 per cent for the New York Stock Exchange and 18 per cent for the New York Curb Exchange. The active trade produced an active demand for memberships.

Homer P. Hargrave, chairman of the new exchange, declared that he couldn't be more pleased

with the results of the first month's operations. He called attention to the fact that the exchange's budget was in balance despite the organizational expenses incurred in connection with the consolidation.

The favorable performance continued in January, 1950, when sales on the Midwest Stock Exchange totaled 1,411,000 shares, an increase of 122.5 per cent over the combined volume of the predecessor organizations in January, 1949. The New York Stock Exchange reported January volume 117.7 per cent ahead of the like month of 1949, while the New York Curb Exchange had an increase of 71.6 per cent.

Trading Comparisons

Because the Chicago Stock Exchange was overwhelmingly larger than the other three exchanges combined, some effects of the consolidation are most readily comprehended when the Chicago exchange is taken as the basis for comparison.

At the end of 1948, the Chicago Stock Exchange had 300 memberships issued and outstanding. Member firms totaled 172, of whom 121 were partnerships and 51 were corporations. Some of these firms

held multiple memberships. Fifty-eight new memberships were issued to meet the requirements of the member, including forty-six that were sold to firms not previously members of the Chicago exchange. Demand for memberships proved so strong after the merger that an additional 42 seats were sold, bringing the total membership to 400.

Not all of the purchasers of the additional 42 memberships had been acted on by the membership committee by the end of 1949, and the total number of memberships actually issued and approved as of that date was 361. This figure included memberships held by 76 corporations and 160 partnerships. These 236 member firms had offices in 50 major cities, and branches in more than 300 cities.

Four brokers from other cities have become floor brokers on the Midwest Exchange. Two are from Cleveland, one from St. Louis, and one from Minneapolis. In addition, two St. Louis member firms have become "specialists" in a number of stocks that transferred from the St. Louis Stock Exchange.

The Midwest Stock Exchange itself maintains branch offices in Cleveland and St. Louis. The branches are connected by teletype with the trading floor, and market

quotations are "boarded" in the branch offices.

The primary objective in the establishment of the Midwest Stock Exchange was to create broader and better markets for the securities listed on the four exchanges that joined in the merger, and thereby to attract further new listings of securities.

The merger itself, of course, provided a much broader stock list for the new exchange. At the end of 1949 a total of 408 securities, representing 351 companies, were

available for trading on the exchange, as compared with 306 securities of 263 companies available at the end of 1948 on the Chicago Stock Exchange.

Other Gains

Aside from the trading volume, which is undoubtedly the best indicator of the new exchange's success, there is other evidence that the merger is accomplishing the results foreseen by those who were most influential in making it a reality. Chairman Hargrave's year-

end statement for 1949 reported: "There has been an unusual amount of public investor interest in our new organization, and we are gratified with the numerous applications for listing which we are receiving and for the establishment of midwestern transfer facilities by large national corporations."

The announcement in February, 1950, that the Sinclair Oil Company had appointed the First National Bank of Chicago as transfer agent and the Continental Illinois National Bank and Trust Company of Chicago as registrar for its common stock, was considered a significant victory for the new exchange. While several other national companies with stocks listed on both the Midwest and the New York stock exchanges had recently appointed Chicago transfer agents and registrars, this was the first instance in which a company with headquarters outside the middle west had taken the step.

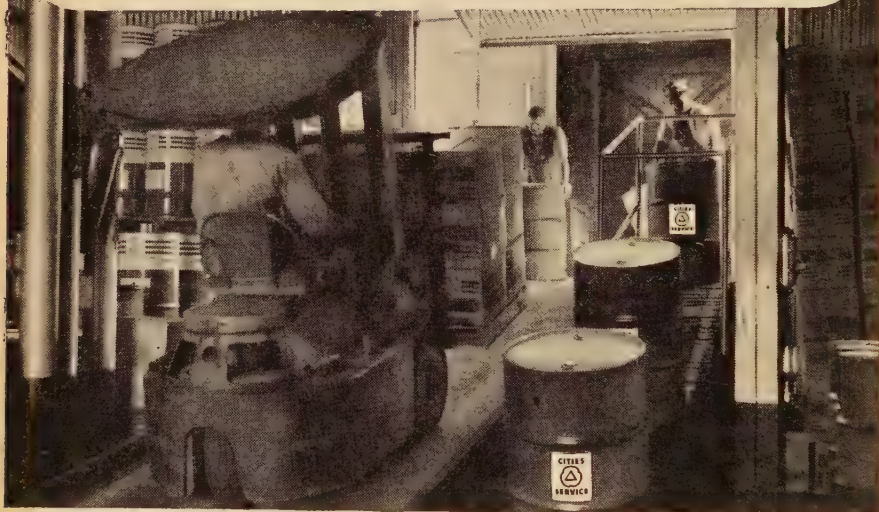
The existence of transfer agents and registrars in Chicago for stocks traded on the Midwest exchange has two important effects: One is the speeding up of the transfer of stocks from the seller to the new owner, while the second and most important effect is the avoidance of the transfer tax imposed by the state of New York.

Listing applications received by the exchange include several from well established and growing corporations whose securities are now traded in the over-the-counter markets. The Midwest exchange's own conception of its function is that of a medium whereby the fast-expanding financial and investment needs of the great middle west can be met. The exchange has described its creation as "an important step forward for financial independence and economic self-reliance" of the territory it serves.

A continuation of the strong showing made by the new exchange in its early weeks is expected to prove the adage "Success breeds success." Active markets will, of course, tend to divert orders to the Midwest exchange that might otherwise have been directed to another exchange. Active markets will also encourage new listings, and these in turn will tend to raise trading volume.

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CHICAGO STOCK RANGE IN 1949

	Total 1949 Div.	Vol.	High	Low	Last	Net Chge.
A						
Abbott Laboratories (Old)	\$ 1.80	2,682	78	76 1/2	78	+ 7 1/4
Abbott Laboratories (New)	.90	27,001	50	37 1/4	50	— 9
Acme Steel Co. (Old)	2.00 (1)	1,495	48 3/8	37	37	— 9
Acme Steel Co. (New)	.75	22,060	20 3/8	18	19 5/8	— 3
Adams Mfg. Co., J. D.	1.25	1,450	17	13	16	+ 3
Admiral Corp. (Old)	.60 (1)	83,442	30	15 1/8	30	+ 10 1/2
Admiral Corp. (New)	.20	30,642	19 1/4	14 1/2	17 7/8	— 5/8
Advance Alum. Castings Corp.	.62 1/2	18,800	6	4 1/4	5 5/8	— 3 3/8
Aetna Ball & Roller Bearing	.60	22,750	10 3/8	6 1/4	6 3/8	— 1 1/2
Akron Brass Mfg. Co.†	.10	6,335	3 7/8	3	3	+ 1 1/8
Alleghany Corp.*	—	25,080	4	2 1/8	3 5/8	+ 10 1/8
Allied Laboratories	1.15	22,900	28	17 1/4	27 7/8	+ 3 3/8
Allis-Chalmers Mfg. Co.	2.00	400	30 5/8	30 1/2	30 5/8	+ 2 1/4
American Airlines, Inc.*	—	79,509	10 3/8	7 3/8	9 3/4	— 1/2
American Home Prod. Corp.*†	1.70	550	28 1/2	28	28 1/2	+ 4 1/4
American Investment Co. (Ill.)†	1.50	9,433	22 1/2	19 3/4	22 1/2	— 3 3/4
Amer. Rad. & Std. San. Corp.*	1.25	47,101	14 3/4	10	13 7/8	— 5 1/2
Armco Steel Co.*	2.50	29,434	28 7/8	19 5/8	28 5/8	+ 7/8
Amer. Tel. & Tel. Co.†	9.00	240,169	150 1/2	138 3/8	146 1/2	— 1/4
Anaconda Copper Mining Co.*	2.50	74,859	35	25 1/4	28 1/4	— 1
Armour & Co. (Ill.)	—	119,719	8 1/2	5	7 7/8	+ 3 3/4
Aro Equipment Corp.	.35	100	8 7/8	8 7/8	8 7/8	— 1
Asbestos Mfg. Co.	—	29,100	1 3/8	1	1 1/8	— 1/4
Associates Investment Co.	2.90	400	42 3/8	42 1/4	42 3/8	+ 10 3/8
Atchison Topeka & S. F. RR*	8.00	6,445	103 1/2	86	99 3/4	— 1/4
Athey Products Corp.	.25	14,750	5 7/8	3 5/8	4 1/4	— 1
Automatic Washer Co.	—	10,950	2 7/8	1 1/2	1 3/4	— 3/4
Avco Mfg. Corp.	.30	65,428	7 1/2	5	6	— 1
B						
Barber Company, W. H.	1.50	420	26 1/2	21 1/2	21 1/2	— 6 1/2
Basic Refractories, Inc.†	.60	200	6 1/2	6 1/2	6 1/2	+ 3 3/4
Bastian-Blessing Co.	4.00	6,050	36 3/4	25 1/2	33 1/2	— 3
Belden Mfg. Co.	1.30	18,700	15 7/8	11	11 7/8	— 2 5/8
Bendix Aviation Corp.	3.50	31,746	37 3/8	27	36 7/8	+ 1 1/8
Berghoff Brewing Corp.	—	37,450	7 3/4	4 1/2	4 5/8	— 2
Bethlehem Steel Corp.*	2.40	82,700	33 3/8	23 3/8	32 1/4	— 1/4
Binks Mfg. Co.	1.50	5,550	14	10	11 1/2	— 1 1/2
Bliss & Laughlin, Inc.	1.50	4,330	13 5/8	9 1/8	13 3/4	— 0
Borg Corp., Geo. W.	1.00	18,550	13 3/4	9	13 1/2	+ 4 1/4
Borg-Warner Corp.	5.50	35,245	59 1/2	43	58	+ 5 1/2
Brach & Sons, E. J.	3.50	6,450	56	40	50	+ 8
Brown Shoe Company, Inc.†	2.10	4,305	39 3/4	38	39 3/4	+ 9 1/8
Bruce Co., E. L.	2.00	8,650	22	14 1/2	17 1/2	— 4 1/2
Burd Piston Ring Co.	.15	3,650	12	6 3/4	7	— 6
Burkhart Mfg. Co., F.†	3.00	8,507	30	16	30	+ 12
Burton-Dixie Corp.	1.40	5,650	18	13 7/8	17 3/4	+ 1 1/2
Butler Bros.	—	34,836	11	6 1/4	11	+ 2 3/8
Butler Bros., Pfd.	4.50	125	63	63	63	—
C						
Canadian Pacific Ry. Co.*	1.25	38,606	15 5/8	10 1/2	15 1/2	+ 1 1/8
Carr-Consolidated Biscuit Co.	—	49,200	4 1/4	2	3 1/8	+ 1/8
Castle & Co., A. M.	2.00	600	35 1/4	24 1/8	24 1/2	— 7 1/2
Central & S. W. Corp.	.82 1/2	152,581	14 3/8	12 3/4	14 3/8	+ 3 1/8
Central Ill. Light Co.	2.20	3,247	36 3/8	33 7/8	36 3/8	— 1 1/2
Cent.-Ill. Sec. Co.	—	29,150	2 7/8	7/8	2 3/4	+ 8 3/8
Cent.-Ill. Sec. \$1.50 Pfd.	1.00	17,300	20	11 1/4	19 3/4	— 3 1/4
Century Electric Co.†	.42 1/2	1,992	9 5/8	6 1/2	6 3/4	+ 3
Certain-Teed Prod. Corp.*	1.00	35,173	16 1/2	9 1/2	16 1/8	— 3 3/4
Chain Belt Co.	2.00	100	24	24	24	— 3 5/8
Cherry-Burrell Corp.	.65	7,425	13 1/2	9 1/4	10 1/8	+ 2 1/8
Chesapeake & Ohio Ry.*†	3.00	25,164	29 1/4	27 3/8	28 1/2	+ 1 1/4
Chicago Corp.	.60	62,650	14	9	13 1/8	+ 6
Chicago Corp., Pfd.	3.00	3,750	65 1/4	61	64 1/2	+ 1/4
Chgo. Electric Mfg. Co. "A"	5.00	290	30	28	28	+ 1/4
Chgo., Milw. St. P. & P. Ry.	—	12,530	8	4 5/8	8	— 3 3/4
Chgo. & Northwestern Ry., Pfd.	—	600	27 7/8	27	27	+ 4 7/8
Chgo., Rock Isl. & Pac. Ry.	3.00	5,603	38 1/8	26 1/2	38 1/8	— 12 1/4
Chgo., Rock Isl. & Pac. Ry., Pfd.	5.00	300	72	65	65	+ 1 1/4
Chicago Towel Co.	7.00	2,122	90	66 3/4	86 1/4	+ 14 3/4
Chicago Towel Co., Pfd.	7.00	430	116 1/2	111	112 1/4	+ 1 1/4
Chrysler Corp.	5.25	92,866	67 7/8	45 3/4	67 7/8	+ 24 3/8
Cities Service Co.	3.50	33,556	70	39 3/4	68 5/8	+ 8
City Products Corp.†	2.50	6,132	34 1/2	29 1/2	33	— 1
Clev.-Cliffs Iron Co.†	1.25	60,778	16	10 1/4	14 7/8	— 3/4
Clev.-Cliffs Iron Co., Pfd.†	4.50	10,898	76	63 1/2	73 3/4	+ 4 1/8
Cleve. Electric Illum.†	2.20	14,411	43 1/2	42 1/4	43 3/8	+ 3
Cleve. Electric Illum., Pfd.†	4.50	49	110	110	110	+ 4 1/2
Cleveland Graphite Brass Co.*†	1.80	4,627	27 3/4	27	27 3/4	+ 1 1/8
Clark Controller Co.†	1.25	753	16 1/2	15	15 5/8	—



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ASBESTOS PRODUCTS

**FRICTIONS - BRAKE LININGS
CLUTCH FACINGS - FABRIC BEARINGS**
GATKE CORPORATION, 242 N. La Salle St., Chicago

	Div.	Vol.	High	Low	Last	Chge.
Clinton Foods, Inc.†	2.40	6.809	34½	33	34	+ 6¾
Club Aluminum Products Co.	.40	2.800	7¾	6	7¾	+ 1⅞
Coleman Co., Inc.	1.40	9.200	28¼	15¼	20⅞	- 7⅞
Columbia Gas System, Inc.*	.71¼	54.393	13	10	12⅞	+ 1¾
Commonwealth Edison Co.	1.52½	352.008	30⅞	25¼	30½	+ 5¼
Consolidated Natural Gas*†	2.00	2.507	43¾	40⅞	41	+ ½
Consumers Co.		980	30	16½	18	- 14
Consumers Co., Pfd.	2.50	1.170	38	22	26⅞	- 8⅞
Continental Motors Corp.*	.20	23.524	8¼	5¼	6¼	- 1½
Crane Co.	2.25	19.901	31⅞	22¼	27⅞	- 2
Curtis Lighting, Inc.	.25	30	5½	5½	5½	- ½
Curtiss-Wright Corp.*	1.00	58.953	97⅞	7	7½	+ ¾

D						
Det. & Clev. Nav. Co.*†		9.750	8⅞	47⅞	8½	+ 4⅞
Dodge Mfg. Co.	.75	12.300	7¾	5½	5⅞	- 1⅞
Doehler-Jarvis Corp.	2.50	8.078	36	26¼	36	+ 5¼
Domestic Credit Corp. "A"	.10	54.000	3¾	2¼	3½	+ 1¼
Dow Chemical Co.	1.30	4.555	56½	53½	54⅞	+ 5¾
duPont deNemours & Co., E. I.*†	4.50	14.484	62¾	59½	61⅞	-

E						
Eaton Mfg. Co.†	3.00	4.629	30	29	30	- 1½
Eddy Paper Corp.	10.00	1.881	95	46	79¾	- 11¼
Elder Mfg. Co.†	1.00	160	18	16⅞	18	- 4
Elec. Cont. & Mfg. Co.†	10.25	1.236	95	77	89	- 1
Elgin National Watch	1.25	4.900	13	11	13	- 3⅞
Erie Railroad Co.*†	1.00	2.293	12⅞	12	12½	- 1¾
Eversharp, Inc.		1.000	8¾	7⅞	8¾	-

F						
Falstaff Brewing Corp. (New)†	.35	6.185	23½	19⅞	21¾	-
Falstaff Brew. (Old)†	1.37½ (1)	7.583	41⅞	24	41⅞	+ 7⅞
Farnsworth Tel. & Radio		17.544	7⅞	1	1	- 6¼
Firestone Tire & Rubber†	4.00	374	49¾	45	47¼	+ 1¾
Fitz Simons & Connell D&D	1.00	940	11¾	9½	10	+ ¼
Flour Mills of America, Inc.	.60 (1)	12.700	12¼	9½	10½	- 1¾
Four Wheel Drive Auto Co.		13.800	6¾	4	5	- 1¼
Fox Brewing Co., Peter		22.950	14¼	6¾	10	+ 2¼

G						
Gabriel Co.*†	.10	506	7	57⅞	57⅞	- 1½
Gen. Amer. Trans. Corp.	3.00	4.965	46¼	42¼	46¼	+ 2¾
General Candy Corp.	1.25	3.360	14½	10	14	- 1½
General Electric Co.*	2.00	113.877	42¾	34¼	42¾	+ 3
General Finance Corp.	.27½ (1)	11.050	7⅞	5¼	7⅞	+ 1⅞
General Finance Corp., Pfd.	.50	850	8¼	8	8	+ ¾
General Motors Corp.	8.00	201.540	73	52	71⅞	+ 12⅞
General Outdoor Adv. Co.	1.30	50	16½	16½	16½	-
Gen. Public Utilities Corp.*	.85	22.460	17	11¼	16½	+ 5¼
Gibson Refrigerator Co.	.60	44.200	9¾	6	8	- 1¼
Gillette Safety Razor Co.	3.25	21.993	37½	24¼	34¾	+ 3
Glidden Co.*†	1.60 (1)	6.292	25¾	23¼	25	+ 3¾
Goldblatt Bros., Inc.	.50	11.350	15	8¾	15	+ 6½
Goodyear Tire & Rubber Co.	4.00	11.303	43⅞	37½	43⅞	+ 15⅞
Gossard Co., The, H. W.	1.20	22.100	17	10½	11⅞	+ 4⅞
Graham-Paige Motors Corp.*		40.946	3	1⅞	1¾	- 1⅞
Gray Drug Stores, Inc.†	.92½	10.556	14½	10	11⅞	- 2⅞
Grt. Lakes Dredge & Dock	1.00	29.700	15⅞	14⅞	15¼	+ 1⅞
Grt. Lakes Towing Co.† (Old) 50% stock		1.575	35½	25	35½	+ 10½
Grt. Lakes Towing Co.† (New)	.75	1.815	23	20	21	-
Grt. Lakes Towing Co., Pfd.†	7.00	314	80	75	80	+ 7
Greif Bros. Cooperage "A"†	.90	28.938	13	9¾	12½	+ ¾
Griesedieck West. Brew.†	2.00	38.536	29½	19½	26¼	+ 6⅞

H						
Hall Printing Co. (W. F.)	1.25	834	14⅞	12⅞	14⅞	+ ⅞
Hammond Instrument Co.	1.25	21.950	12¼	8½	12	+ 2
Hanna Co., M. A., Pfd.†	4.25	57	105	105	105	+ 1½
Harbauer Co., The†		98	12½	8⅞	8⅞	- 1⅞
Harnischfeger Corp.	1.85	4.800	25	19	22¼	+ 4¼
Heileman Brewing Co., G.	2.00	49.500	22¾	15½	21¼	+ 4¾
Hein-Werner Corp.	.60	12.800	97⅞	6	6¾	- 2¼
Hibbard, Spencer, Bartlett	3.25	7.551	53	37	40	- 9¾
Horder's, Inc.	1.25	2.170	17	12½	12⅞	- 3⅞
Hormel & Co., Geo. A.	2.50	65	44	40⅞	40⅞	- 4⅞
Hubbell, Inc., Harvey	2.20	420	21	19	19	- 1½
Hupp Corp.		6.251	27⅞	1⅞	1¾	- ¾
Huttig Sash & Door Co.†	5.00	5.345	39⅞	23	32	- 10
Huttig Sash & Door Co., Pfd.†	5.00	155	105¾	102	102	- 0
Hydraulic-Press Brick Co.†		4.245	3	17⅞	3	+ 1⅞
Hydraulic-Press Brick Co., Pfd.†	1.00	2.792	28	16	23	+ 2

I						
Illinois Brick Co.	.45	16.250	13½	7⅞	107⅞	- ¼
Ill. Central RR Co.		20.546	36⅞	23	36½	+ 6⅞
Independent Pneumatic Tool Co.	1.40	22.900	18½	13	14⅞	- 4⅞
Ind. Steel Products Co.		10.200	5½	2⅞	4⅞	- ¾

	Div.	Vol.	High	Low	Last	Chgc.
Ind. Steel Products Co., Wts. _____		800	1 1/8	1	1	- 1/8
Indianapolis Power & Light Co. _____	4.00	7.467	29 3/4	23 3/4	29 1/2	+ 6 3/4
Industrial Rayon Corp.* _____	3.00 (1)	7.532	52 1/4	48 1/4	52 1/4	- 1 1/4
Interlake Iron Corp.*† _____	1.50	1.254	13	10 1/2	10 1/2	- 5 1/2
Interlake Steamship Co.† _____	2.00	13.806	35	31 5/8	32 7/8	+ 1/4
International Harvester Co. _____	1.70	79.011	29 3/8	23	27 5/8	+ 7/8
International Shoe Co. _____	3.00	13.693	45 1/2	44 3/4	45 1/2	+ 4

J

Jaeger Machine Co.† _____	1.30	19	13 1/2	13 1/2	13 1/2	- 7 3/8
J'hns'n, Steph'n's & Sh'kle Shoe Co.† _____	.62 1/2	2.440	10	6 7/8	7	- 2 3/4
Jones & Laughlin Steel Corp.*† _____	2.60 (1)	1.589	27 1/4	27 1/4	27 1/4	- 11 3/4

K

Katz Drug Co. _____	.75	8.250	10 1/2	6 7/8	9 5/8	+ 2 1/2
Kelley Isl. Lime & Trans. Co.† _____	1.50	11.775	15 1/2	11 5/8	14 1/4	+ 3 1/2
Kellogg Swbd. & Sup. Co. _____	1.10	97.050	15 5/8	10	13 1/2	+ 3 1/2
Kellogg Swbd. & Sup. Co., Pfd. _____	5.00	136	88	82	82	- 8
Key Company, Co.† _____	.50	4.921	10	6 1/2	9 1/2	+ 2
Knapp-Monarch Co.† _____	.37 1/2	12.367	8 1/2	4 1/4	5 1/8	- 5 1/8

L

Laclede-Christy Co.† _____	1.05	8.765	13 3/8	12 5/8	12 3/4	- 1/4
Laclede Gas Light Co. _____	.20	157.447	8	4 7/8	7 1/2	+ 2 1/2
Lamson & Sessions Co. "B"† _____	1.20	15.497	11 5/8	8 5/8	10 3/4	- 3/8
Landis Machine Co. _____	1.50	145	22 1/2	22	22 1/2	- 1/2
LaSalle Extension University _____	.75	11.150	7 1/4	6 1/4	6 7/8	- 1/8
Leath & Co. _____	2.00	9.100	15	10	13 3/8	+ 1 5/8
Leath & Co., Pfd. _____	2.50	582	39 1/4	35	35	- 3
Libby, McNeil & Libby _____	.50	62.042	8 3/8	6 3/4	7 1/4	- 1
Lincoln Printing Co. _____	3.00	6.750	22	14 1/4	20	+ 5
Lincoln Printing Co., Pfd. _____	3.50	54	53	51	51	- 0 -
Lindsay Light & Chemical _____	2.60	6.650	64 1/2	39	51	+ 3/4
Lindsay Light & Chemical, Pfd. _____	.70	85	13 1/2	13 1/4	13 1/2	- 1 1/2
Line Material _____	.80	1.300	23 1/4	21 3/4	23 1/4	+ 1/4
Lion Oil Co. (New) _____	1.12 1/2	500	32	32	32	-----
Lynch Corp. _____	1.00	100	13 7/8	13 7/8	13 7/8	-----

M

Mapes Consolidated Mfg. Co. _____	3.00	550	37	34	35 1/2	- 1 1/2
Marshall Field & Co. _____	2.00	48.099	24 3/8	19 3/8	24 1/4	+ 2
Marshall Field & Co., Pfd. _____	4.25	30	98	98	98	- 1/2
Martin Co., The Glenn L.*† _____		200	11	11	11	+ 1 1/2
McKay Machine Co.† _____	.50	315	28	22 1/4	28	+ 6
McKee & Co., Arthur G. "B"† _____	4.00	4.354	33 1/4	26	30	- 0 -
McQuay Norris Mfg. Co.† _____	1.20	1.567	17 1/4	13 1/8	13 5/8	- 2 3/4
Medusa Portland Cement Co.† _____	3.00	7.427	50 1/4	32 1/4	49 1/2	+ 14 1/2
Metropolitan Brick, Inc.† _____	.60	19.345	6 3/8	3 7/8	6 1/8	+ 1 5/8
Meyer-Blanke Co.† _____	1.50	1.387	18	14	16	-----
Mickelberry's Food Products _____	.90	12.450	13	9 1/4	9 1/2	- 1/2
Middle West Corp. (Old) _____	Stock	14.278	7 1/2	6 5/8	7 1/2	- 4 3/8
Middle West Corp. (New) _____		132.936	2 5/8	1 3/4	2 1/2	-----
Midland Steel Products† _____	2.00	300	34	29	34	-----
Midwest Piping & Supply Co.† _____	2.05	3.005	26	19 1/4	24	+ 3
Miller & Hart, Com. _____	1.62 1/2	98.000	11	4 1/2	6	- 4 3/4
Miller & Hart, Pfd. _____	1.00	23.850	14 1/8	10	12 3/4	- 1 3/4
Minneapolis Brewing Co.† _____	1.75	20.735	17 7/8	14	17 1/2	+ 4
Missouri Portland Cement Co.† _____	1.50	10.899	22 7/8	16	22 1/2	+ 5 1/2
Modine Mfg. Co. _____	2.60	8.800	29 3/4	21 1/2	29 3/4	+ 5
Monroe Chemical Co. _____	.25	1.000	4 3/4	3	3	- 1 1/2
Monroe Chemical Co., Pfd. _____	3.50	300	41 1/8	35	35	- 7
Montgomery Ward & Co. _____	3.00	43.363	59	47 7/8	55 5/8	+ 1 1/8
Muskegon Motor Spec. "A" _____	2.00	890	28 1/2	20	21 1/4	- 8
Myers & Bro. Co., The F. E.† _____	3.00	275	49	49	49	- 3 1/2

N

Nachman Corp. _____	1.25	1.400	13 1/4	12	13 1/4	+ 1
Nash-Kelvinator Corp.* _____	2.15	81.763	17 3/4	10 3/4	17 1/2	+ 27 3/8
National Acme Co.† _____	2.00	906	21 1/4	19	21 1/4	-----
National Cylinder Gas Co. _____	.80	200	10 3/4	10 3/4	10 3/4	- 1/4
National Pressure Co. _____	.87 1/2	2.750	10 1/4	6 3/4	9	- 1 1/8
National-Standard Co. _____	2.00	12.650	31 3/4	24	25 3/4	- 4 1/4
National Tile & Mfg. Co.† _____	.25	11.092	4 3/8	3 3/8	3 1/2	- 5/8
Nestle-LeMur Co.† _____		840	6 1/4	5 1/4	5 1/4	- 3/4
New York Central RR Co.* _____	.50	44.452	13 1/2	9 1/4	11 3/4	- 5/8
Noblitt-Sparks Ind., Inc. _____	2.20	2.450	26 3/4	17 1/4	26	+ 5 1/4
North American Car Co. _____	2.50	8.150	31	24	24 3/4	- 5 1/4
North American Co.* _____	1.00 (1)	8.411	19 1/2	18 7/8	19 1/8	+ 3 1/2
Northern Illinois Corp. _____	.80	1.550	10	8	8 3/4	+ 3/4
Northwestern Bancorporation† _____	1.20	57.253	27 1/4	22 1/4	26 1/4	+ 3 1/4
Nunn-Bush Shoe Co. _____	1.00	880	18	16	16	- 1/2

O

Oak Mfg. Co. _____	.85	59.150	10 5/8	6 3/4	10 5/8	+ 1 3/8
Ohio Brass Co., "B"† _____	5.00	1.072	44	33 1/2	41 1/4	+ 7 3/4
Ohio Edison Co. _____	2.00	5.920	32 7/8	31 3/4	32	+ 2 5/8
Ohio Oil Co.* _____	2.30	6.351	30	27 1/2	27 1/2	- 5 5/8

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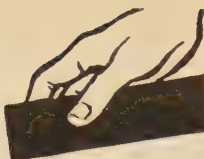
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	Div.	Vol.	High	Low	Last	Chge.
Omnibus Corp.	-----	100	73/4	73/4	73/4	-----
Ontario Mfg. Co.	-----	330	20	14	16	+ 1
P						
Packard Motor Car Co.* .....	.50	85.367	41/4	31/4	4	-----
Pan American Airways Corp.* .....	.25	23.915	103/8	81/8	91/8	+ 3/4
Paramount Pictures, Inc.* (Old)	2.00	39.259	241/4	193/8	215/8	- 17/8
Paramount Pictures (New)	37	191/8	191/8	191/8	191/8	-----
Parker Pen Co.	2.50	700	241/2	20	231/4	+ 31/2
Patterson-Sargent Co.†	1.50	2,326	24	20	21	- 3
Peabody Coal Co. ....	.70	35.800	8	53/4	57/8	- 17/8
Peabody Coal Co. 5% Pfd.	1.25	21.907	191/2	15	151/4	- 33/4
Penn Electric Switch "A"	1.80	4.750	17	9	16	+ 21/2
Pennsylvania R.R. Co. ....	.75	110.730	173/4	133/4	17	+ 11/2
Peoples Gas Lt. & Coke Co.	6.00	9.270	134	106	134	+ 42
Pepsi-Cola Co.* .....	.20	61.929	12	81/8	81/2	+ 1/2
Perfect Circle Corp. ....	.80	3.470	11	9	11	+ 1
Potter Co.	1.20	3.150	71/2	47/8	71/2	+ 21/2
Pressed Steel Car Co.	-----	7.105	8	5	71/8	+ 1/2
Process Corp.	-----	750	4	21/2	31/2	- 1/2
Pure Oil Co.*	2.00	49.991	331/4	25	291/4	- 11/2
Q						
Quaker Oats Co.	5.50	560	1051/2	861/2	1051/2	+ 191/4
R						
Radio Corp. of America* .....	.50	98.644	141/4	93/4	121/2	- 11/8
Radio-Keith-Orpheum Corp.* .....	.45	19.844	91/4	71/8	83/8	+ 3/8
Rath Packing Co.	1.40	2,030	261/4	22	241/2	- 5/4
Reliance Elec. & En'g Co.†	2.25	367	191/4	18	191/4	- 5/4
Republic Steel Corp.*	3.00	65.391	271/8	171/8	24	- 13/8
Rexall Drug, Inc.*	-----	37.104	61/8	41/4	61/8	+ 13/8
Richman Brothers Co.†	3.00	24.015	44	37	43	+ 33/4
River Raisin Paper Co. ....	.45	100	65/8	65/8	63/8	-----
S						
St. Louis Car Co.†	-----	288	221/4	21	221/4	+ 2
St. Louis Nat'l Styds. Co.	2.50	4.035	41	301/8	40	+ 81/8
St. Louis Pub. Svc. "A"† .....	.50	44.732	61/8	37/8	5	+ 3/8
Sangamo Electric Co.	2.80	5.100	297/8	225/8	28	- 13/4
Schenley Industries, Inc.*	2.00	7.019	313/4	251/2	313/4	+ 2
Schwitzer-Cummins Co.	1.00	3.550	13	9	12	+ 11/4
Sears, Roebuck & Co.	2.25	121.659	44	34	44	+ 41/2
Sec. Inv. Co. of St. Louis†	2.00	725	40	311/2	40	+ 71/2
Sec. Inv. Co. of St. Louis, Pfd.†	5.00	119	99	96	99	- 0 -
Serrick Corp. "B"	1.60	7.700	131/2	83/4	111/2	- 21/2
Shellmar Products Corp.	1.60	38.300	29	22	281/2	+ 21/2
Signode Steel Strapping Co.	1.00	12.900	133/8	105/8	121/4	- 3/4
Sinclair Oil Corp.	2.00	126.607	241/2	19	231/8	+ 5/8
Society Brand Clothes, Inc. ....	.65	10.200	61/8	45/8	5	- 11/8
Socony-Vacuum Oil Co.*	1.10	186.990	171/2	141/8	163/4	- 1/4
South Bend Lathe Works	1.60	13.900	211/8	131/8	161/8	- 37/8
Sparks-Withington, Pfd.†	6.00	28	96	93	96	+ 3
Speed Queen Corp. "A"	1.00	300	16	141/4	141/4	- 23/8
Spiegel, Inc.	-----	34.834	10	7	87/8	+ 13/8
Standard Brands*	1.45	50	18	18	18	-----
Std. Dredging Corp. ....	.10	22.800	43/4	23/4	27/8	- 0 -
Standard Forgings Corp. ....	.80	1.600	10	81/8	9	- 2
Standard Oil Co. (Indiana)	2.00(1)	88.272	453/4	361/2	453/8	+ 61/4
Standard Oil Co. (N. J.)*	4.00(1)	60.706	743/8	601/4	671/8	+ 61/4
Standard Oil Co. (Ohio)	2.00	29.638	261/2	251/4	257/8	+ 3/4
Standard Steel Spring Co.*	1.75	15.002	201/4	12	201/8	+ 57/8
Stein & Co., "A"	2.00	200	231/2	231/2	231/2	- 3
Sterling Aluminum Products†	1.00	7.065	15	93/4	11	-----
Stewart-Warner Corp.	1.00	17.488	141/4	91/2	121/8	- 11/4
Stone Container Corp. ....	.80	38.000	81/4	53/4	71/2	+ 11/2
Storkline Furniture Corp.	1.00	1.650	161/4	133/4	16	+ 27/8
Studebaker Corp.*	2.50	86.968	28	163/4	273/8	+ 65/8
Sunbeam Corp. (Old) .....	.50(1)	7.100	41	331/2	38	+ 23/4
Sunbeam Corp. (New)	2.50	3.700	50	28	481/8	-----
Sundstrand Machine Tool Co. ....	.90	49.200	115/8	67/8	91/2	- 11/2
Sunray Oil Corp.*	1.00	66.770	113/4	91/4	111/8	+ 1/4
Swift & Co.	2.35	68.784	361/8	273/8	361/8	+ 71/4
Swift International, Ltd.	-----	22,190	111/8	81/2	91/4	+ 1/4
T						
Texas Company	3.75	44.826	655/8	491/4	607/8	+ 77/8
Thompson Products, Inc.	3.00	813	511/8	345/8	511/8	- 47/8
Thor Corporation	1.50	10.500	131/2	83/4	111/8	- 23/8
Trane Co.	2.00	17.650	291/2	20	291/2	+ 53/4
Transcontinental & West Air.	-----	2.962	171/4	111/4	171/4	-----
208 South LaSalle Street	3.00	7.060	50	421/4	50	+ 6
U						
Union Carbide & Carbon Corp.	2.00	109.901	451/4	34	441/2	+ 31/8
United Air Lines, Inc.	-----	19.637	141/4	103/4	137/8	+ 21/2

	Div.	Vol.	High	Low	Last	Chge.
United Corp., The*	.10(1)	99.046	5	2 3/8	5	+ 2 3/4
United Corp., The, X Div.*		2.919	3 3/8	3 1/8	3 3/8	
United Light & Rlys. Co.*	Stock	16.714	38 1/4	25 1/2	38 1/4	
U. S. Gypsum Co.	9.00	200	109 1/2	109 1/2	109 1/2	
U. S. Steel Corp. (Old)	3.75(1)	59.422	74 3/8	66 1/4	66 1/4	- 3 7/8
U. S. Steel Corp. (New)	1.00	172.025	26 1/2	20 1/4	26 1/2	

V

VanDorn Iron Works Co.†		5.325	9	6	7	
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W

Westinghouse Electric Corp.	1.40	31.514	33	20 7/8	33	+ 7 3/4
White Motor Co.	1.15	1.348	14 1/2	14 1/2	14 1/2	+ 3/4
Wieboldt Stores, Inc.	1.20	6.800	16	10 1/4	13 1/2	+ 3/4
Wieboldt Stores, Inc., Pfd.	4.25	1.035	85	73 7/8	81	+ 3 1/2
Wilson & Co.*	1.00	1.394	11 7/8	11	11 1/8	- 1/4
Wisconsin Bankshares Corp.	.50	43.500	12 3/8	10 1/8	11 3/4	+ 1 1/4
Woodall Industries, Inc.	1.00	7.450	14 3/4	9	14 3/4	+ 4 3/4
World Publishing Co.†		2.048	12	6	11	
Wrigley, Jr. Co., Wm.	5.00	100	76	76	76	

Y

Yates-American Machine Co.	1.00	11.400	16	9 3/4	14	+ 1/2
Youngstown Sheet & Tube Co.	6.00	7.879	77 1/2	71	76	+ 7 3/4
Youngstown Steel Door*†	1.00	1.085	14 1/2	11 3/8	12	- 3 7/8

BONDS

Chicago Trans. Auth. 3 3/4s 1978		58,000	90 3/4	89 1/4	89 1/2	
Peoples Gas Lt. & Coke 3s 1963		38,000	127 1/4	118 1/2	127 1/4	

RIGHTS

Amer. Tel. & Tel.†	119,822	1	14/32	1	1 6/32	
Central & Southwest	71,500	1	1/128	1	1/256	-0-
Columbia Gas System	45,100	5	5/64	1	1/128	27/128
Dow Chemical	300	13	13/64	13	13/64	
Ind. Power & Light	3,500	1	1/64	1	1/128	
Ohio Edison Co.	9,000	1	1/2	1	1/16	
United Light & Rlys.	700	2	1	2		

* Admitted to trading under Section 12(f) of the S.E.C. Act of 1934.

† Includes volume and range of all consolidated exchanges.

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SAVINGS AND LOAN ACTIVITY RISES

A YEAR of greatly expanded home building activity in the Chicago area again swelled the volume of mortgage loans written by the city's savings and loan associations in 1949. The increase continued a trend that has been apparent in this field since the war's end. Meanwhile, share capital also increased in all three categories of federal, insured state, and non-insured Cook County savings and loan associations.

Mortgage Loans Up

The number of Federal associations dropped during the year (as indicated in the accompanying table) from 50 to 49; however, this numerical change was due simply to a reclassification. The number of insured state associations increased from 80 to 88 during the year, and the number of non-insured associations declined from 48 to 46.

Total mortgage loans of federal associations increased from \$284,-

069,711 at the end of 1948 to \$330,567,661 at the end of 1949, while those of insured state associations increased during the same period from \$232,121,848 to \$265,950,984. The combined assets of federal associations increased from \$357,849,352 to \$435,786,664 during the year, and insured state association assets rose from \$280,259,732 to \$321,122,100.

The total assets of 46 non-insured Cook County savings and loan associations stood at \$36,218,446 at the end of 1949, compared with \$30,194,801 for 48 non-insured associations at the end of 1948.

Federal Associations

	Dec. 31, 1949	Dec. 31, 1948
Number of Associations	49	50
Mortgage Loans	\$330,567,661	\$284,069,711
Share Capital	366,947,147	296,856,221
Total Assets	435,786,664	357,849,352

Insured State Associations

	88	80
Number of Associations	88	80
Mortgage Loans	\$265,950,984	\$232,121,848
Share Capital	265,385,717	225,570,041
Total Assets	321,122,100	280,259,732

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Grain Prices Drop Despite Support

THE prolonged downward trend in grain prices which began back in January, 1948, continued through the first half of 1949. About mid-year, however, prices finally rallied, but the swing-back had too little strength behind it during the latter part of the year to bring the market up to the levels of comparable months in 1948. As a result, grain prices for 1949 as a whole averaged somewhat lower than during the preceding year.

The midyear market revival came in response to authoritative reports that record quantities of farmers' grain would be removed from market channels as a result of government support programs. At the close of December of last year, 512,795,000 bushels of wheat were under loans and purchase agreements, as compared with 364,330,122 bushels a year earlier, and farmers still had one more month in which to take advantage of the wheat support program.

The year-end report on the amount of grain in the support pro-

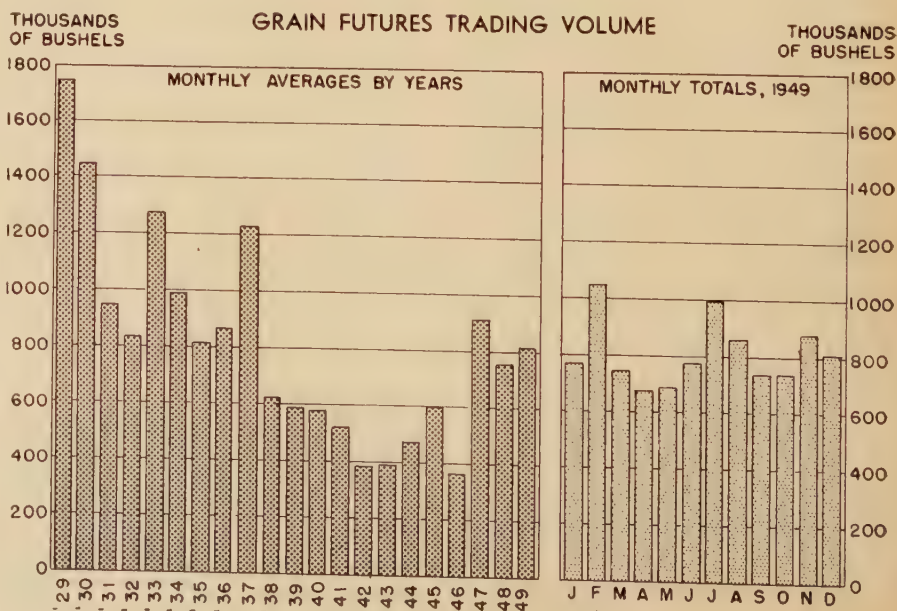
gram showed 30,582,878 bushels of oats, 27,887,611 bushels of barley, 40,066,580 bushels of grain sorghum, 8,806,477 bushels of soybeans, and 103,928,000 bushels of corn. At that date the programs had 30 days

to go, except for corn. The last day to take advantage of the corn program is May 31.

Of the 1948 crop, 555,638,000 bushels of corn were placed under loan and purchase agreement. All indications are that an even larger amount will be impounded this year. In addition, 65,908,131 bushels of the 1948 loan corn were resealed, so that guesses are that the government owns more than 400,000,000 bushels. Last year the government erected bins for the storage of grain in ten states with a total capacity of 320,000,000 bushels, and bins holding 44,716,000 bushels were owned by the Commodity Credit Corporation prior to 1949. Recently the CCC stated it expects approximately 450,000,000 bushels of 1949 crop wheat and other grains, except corn, to be turned over to it in price support operations about the last of April, and that, unless private interests can provide room for 400,000,000 bushels of grain this spring, it will have to expand its bin storage capacity.

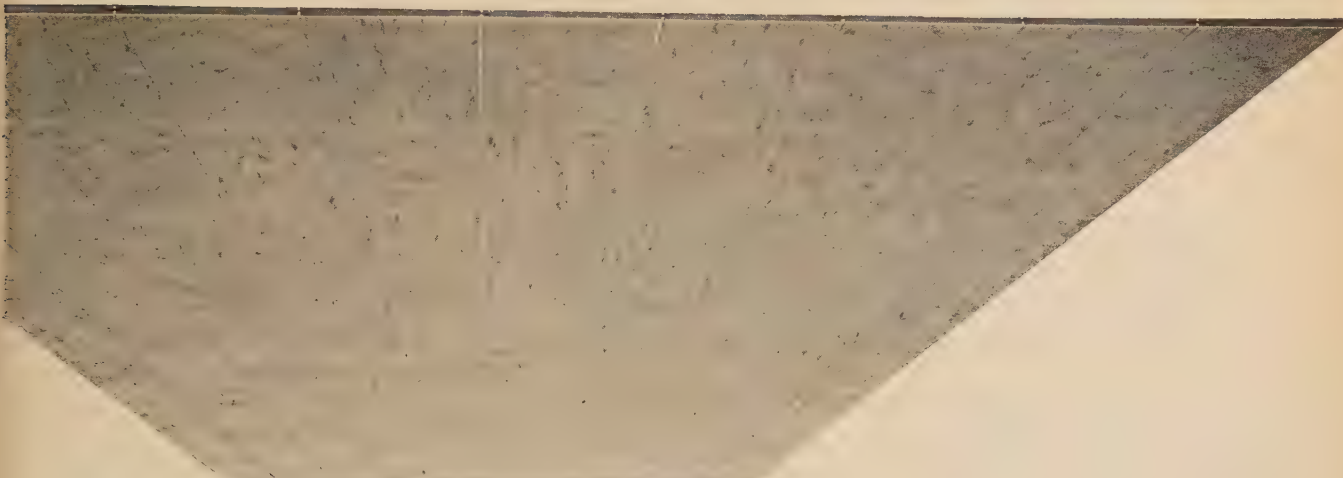
When the burden of these accumulations will become unbearable is in question. A short time ago CCC offered to sell 100,000,000 bushels of corn, 13,000,000 bushels of oats and 20,000,000 bushels of barley for shipment overseas through the commercial trade at nearly current market prices.

The volume of trade in grain futures last year was larger than in 1948, chiefly because of greater activity in the soybean market. Wheat trade was larger than in 1948 but



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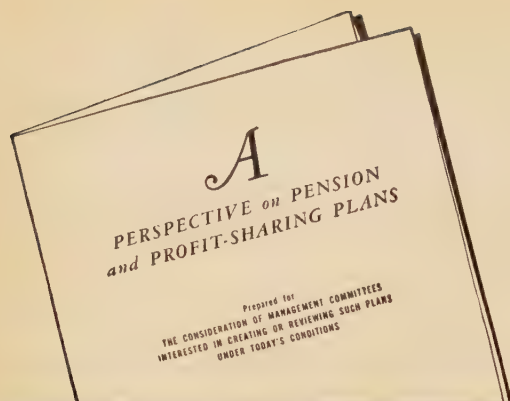
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corn and oats volume dropped considerably.

Production of grain was again heavy and even though not up to the record proportions of 1948 was in excess of domestic needs and normal export requirements. European wheat needs were reduced following harvesting of their crops last summer, and United States exports of grain for the first six months of the 1949-50 season totaled 284,000,000 bushels, compared with 338,000,000 bushels in the corresponding period the year before. Of this amount, 168,000,000 bushels were wheat and flour, which compared with 270,000,000 bushels a year earlier. Other grains, principally corn and corn products, accounted for 116,000,000 bushels, compared with 48,000,000 bushels a year earlier. Shipments of corn alone totaled 64,500,000 bushels in the six months period, against 22,000,000 bushels in the same period the year before. Europe wanted more feed grains to support her live stock industry, and as a result Occupied Germany and Japan got most of the wheat shipped.

The Chicago price level for wheat was affected because too much soft type winter wheat accumulated in Chicago elevators and at points east of Chicago. Production of this wheat was larger than usual, while export demand was largely for hard wheat. Kansas City and Minneapolis markets maintained substantial premiums over the Chicago price where normally they should have been at shipping cost discounts.

Corn Crop Smaller

The corn crop, finally estimated at 3,377,790,000 bushels, was 304,000,000 bushels less than the 1948 record production, but it was augmented by a carryover supply of 700,000,000 bushels of old crop corn, the largest of record, so that the total amount available on October 1, 1949, was larger than it was a year earlier.

Farm use of corn was heavier in 1949 than in 1948, and promises to increase further in the coming year. Primary markets received 346,376,000 bushels of corn for the season ended September 30, 1949, compared with 233,843,000 bushels in 1948. There was, however, no heavy accumulation of corn at terminal markets since the excess moved into consumptive channels.

GRAIN FUTURES VOLUME

Volume of sales in bushels of wheat, corn, oats and soybeans, and total of all grains combined, on the Chicago Board of Trade. (000 omitted)

	Wheat	Corn	Oats	Soybeans	All Grain Total
January	237,094	243,804	74,703	213,330	772,883
February	325,599	387,178	99,255	232,059	1,054,230
March	260,824	246,327	58,311	176,041	747,337
April	282,454	202,997	52,732	131,431	675,717
May	311,918	168,949	57,125	137,792	691,459
June	445,352	164,320	44,627	116,260	781,455
July	509,741	195,202	112,860	157,586	1,001,974
August	318,254	211,368	76,305	227,167	862,052
September	276,076	150,349	51,979	221,663	736,904
October	190,495	126,316	43,503	340,967	731,140
November	230,561	234,323	46,827	319,160	878,399
December	229,417	195,327	58,625	271,595	811,646
Total 1949	3,617,785	2,526,460	776,852	2,545,051	9,745,196
Total 1948	3,208,209	3,739,934	1,647,819	522,620	9,153,955
Total 1947	4,294,240	3,839,151	2,780,632	18,875	10,933,602
Total 1946	277,950	661,444	2,877,738	-----	4,401,595
Total 1945	2,044,704	363,640	1,720,188	-----	7,213,608
Total 1944	1,584,436	182,468	687,501	-----	5,656,700
Total 1943	1,825,161	204,761	691,327	445	4,754,756
Total 1942	1,905,649	1,287,348	318,669	193,762	4,677,490
Total 1941	3,800,866	783,918	371,395	994,466	6,280,353
Total 1940	5,444,785	898,930	228,733	134,971	6,986,633
Total 1939	5,026,736	1,444,357	381,886	79,943	7,141,504
Total 1938	5,683,442	1,495,336	215,182	23,478	7,497,441
Total 1937	10,889,144	2,546,361	898,987	27,318	14,680,435
Total 1936	7,342,880	1,995,674	896,907	11,838	10,454,557

CASH GRAIN PRICE RANGE

Range of cash grain prices (contract grade) for the year 1949, with comparisons

	1949	1948	1947
January	\$2.29½ @ \$2.37	\$2.98 @ \$3.18½	\$2.14½ @ \$2.41
February	2.25 @ 2.26	2.45¼ @ 2.98¾	2.24 @ 2.39
March	2.26 @ 2.30½	2.45 @ 2.61½	2.63 @ 2.89
April	2.25¼ @ 2.42	2.48½ @ 2.64½	2.73 @ 2.75
May	2.10¾ @ 2.36¾	2.42 @ 2.55¼	2.63 @ 2.73
June	1.89 @ 1.99¼	2.28 @ 2.45¾	2.34½ @ 2.70
July	1.90¾ @ 2.00¾	2.22¼ @ 2.39	2.26½ @ 2.44
August	1.88¾ @ 2.00¾	2.15¾ @ 2.26	2.34½ @ 2.56½
September	2.02 @ 2.11¼	2.21¾ @ 2.27	2.54¼ @ 2.92¾
October	2.06¾ @ 2.10	2.24¼ @ 2.30½	2.77¾ @ 3.16½
November	2.06¾ @ 2.13	2.28 @ 2.40¼	2.96 @ 3.15½
December	2.17 @ 2.22	2.33½ @ 2.42	3.06¼ @ 3.12

	1949	1948	1947
January	\$1.38¾ @ \$1.51½	\$2.61 @ \$2.86	\$1.31¾ @ \$1.38½
February	1.15½ @ 1.38½	2.04½ @ 2.67	1.36¼ @ 1.61½
March	1.29¾ @ 1.41¾	2.30 @ 2.37	1.59½ @ 1.94½
April	1.36½ @ 1.43¾	2.23¾ @ 2.42¼	1.60 @ 1.89½
May	1.30 @ 1.41½	2.27 @ 2.56¾	1.65½ @ 1.96
June	1.31¾ @ 1.40	2.29¼ @ 2.63	1.91¾ @ 2.27
July	1.38¼ @ 1.45½	2.02 @ 2.73	2.11 @ 2.65
August	1.22½ @ 1.42	1.78 @ 2.32	2.26½ @ 2.90
September	1.28½ @ 1.36¾	1.59 @ 2.17	2.31½ @ 2.95
October	1.11 @ 1.38½	1.37¾ @ 1.83	2.31 @ 2.75
November	1.13 @ 1.35	1.37 @ 1.52	2.39 @ 2.66¼
December	1.29½ @ 1.35	1.42 @ 1.50	2.54¾ @ 2.71

	1949	1948	1947
January	\$0.74¾ @ \$0.92	\$1.33¾ @ \$1.53½	\$0.80½ @ \$0.95
February	.67½ @ .85½	1.09¼ @ 1.41¾	.83¾ @ 1.01
March	.72 @ .80½	1.26 @ 1.43	.91½ @ 1.06
April	.68½ @ .82	1.15¼ @ 1.38¼	.91 @ 1.01¼
May	.65 @ .76¾	1.11 @ 1.28½	.95¾ @ 1.08
June	.63¼ @ .65¾	.97½ @ 1.30	.96¼ @ 1.13½
July	.60¼ @ .73½	.71½ @ 1.07½	.91¼ @ 1.17
August	.58¾ @ .74¼	.72 @ .80½	.97 @ 1.18½
September	.63 @ .74	.74 @ .80¼	1.08 @ 1.30½
October	.66¼ @ .77½	.72½ @ .86½	1.09½ @ 1.32¼
November	.72¾ @ .81	.84½ @ .93	1.15¼ @ 1.37
December	.72½ @ .84¼	.83¾ @ .92	1.25½ @ 1.39

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BARLEY

	1949	1948	1947
January	\$1.45 @ \$1.66	\$2.80 @ \$2.83	\$1.30
February	1.15 @ 1.47		
March			
April	1.04		
May	.98 @ 1.41	2.40 @ 2.43	
June	.93 @ 1.25	1.70 @ 2.50	
July	1.30 @ 1.41	1.36 @ 1.78	1.60 @ 1.75
August	1.05 @ 1.47	1.26 @ 1.78	1.66 @ 2.48
September	1.14 @ 1.62	1.43 @ 1.63	1.69 @ 2.47
October	1.00	1.15 @ 1.64	1.65 @ 2.52
November		1.16 @ 1.69	1.70 @ 2.70
December	1.04 @ 1.35	1.15	1.85 @ 2.82

GRAIN FUTURES PRICE RANGE
DECEMBER WHEAT

	1949	1948	1947	1946
January	\$2.06 $\frac{3}{4}$ @ \$2.14	\$2.48 @ \$2.63 $\frac{3}{4}$		\$1.72 $\frac{1}{2}$ @ \$1.80 $\frac{1}{2}$
February	1.81 @ 2.06 $\frac{3}{4}$	2.11 $\frac{3}{4}$ @ 2.54 $\frac{3}{4}$		1.80
March	1.86 $\frac{3}{4}$ @ 1.96 $\frac{7}{8}$	2.13 $\frac{3}{4}$ @ 2.30 $\frac{1}{4}$	\$2.09 @ \$2.28	1.80 $\frac{3}{4}$ @ 1.83 $\frac{1}{2}$
April	1.90 $\frac{7}{8}$ @ 1.99 $\frac{7}{8}$	2.24 $\frac{3}{4}$ @ 2.41 $\frac{3}{4}$	2.08 $\frac{1}{2}$ @ 2.21 $\frac{1}{2}$	1.83 $\frac{1}{2}$
May	1.89 $\frac{1}{2}$ @ 1.99 $\frac{7}{8}$	2.25 $\frac{1}{2}$ @ 2.35 $\frac{1}{4}$	2.12 $\frac{3}{4}$ @ 2.30 $\frac{1}{4}$	1.83 $\frac{1}{2}$
June	1.89 $\frac{1}{4}$ @ 2.03 $\frac{7}{8}$	2.27 $\frac{7}{8}$ @ 2.34 $\frac{1}{2}$	2.06 $\frac{1}{2}$ @ 2.23	1.83 $\frac{1}{2}$ @ 1.98 $\frac{1}{2}$
July	1.97 $\frac{1}{2}$ @ 2.09 $\frac{3}{4}$	2.25 $\frac{7}{8}$ @ 2.34	2.13 $\frac{3}{4}$ @ 2.39	
August	2.01 $\frac{7}{8}$ @ 2.09 $\frac{3}{8}$	2.19 $\frac{3}{4}$ @ 2.28 $\frac{1}{2}$	2.27 $\frac{1}{4}$ @ 2.56 $\frac{3}{4}$	
September	2.06 $\frac{1}{2}$ @ 2.16 $\frac{3}{8}$	2.22 $\frac{1}{2}$ @ 2.27	2.50 $\frac{3}{4}$ @ 2.91 $\frac{1}{4}$	
October	2.11 @ 2.15 $\frac{3}{4}$	2.23 $\frac{7}{8}$ @ 2.30 $\frac{1}{4}$	2.74 $\frac{1}{2}$ @ 3.12 $\frac{3}{4}$	
November	2.08 $\frac{3}{8}$ @ 2.19 $\frac{1}{2}$	2.27 $\frac{1}{8}$ @ 2.41 $\frac{7}{8}$	2.86 $\frac{1}{4}$ @ 3.20 $\frac{1}{4}$	
December	2.17 $\frac{1}{4}$ @ 2.23 $\frac{3}{8}$	2.34 @ 2.43 $\frac{1}{2}$	2.99 @ 3.16	

MAY WHEAT

	1949-50	1948-49	1947-48	1946-47
June	\$1.92 $\frac{3}{4}$ @ \$1.96 $\frac{7}{8}$	\$2.26 $\frac{1}{2}$ @ \$2.32 $\frac{1}{4}$	\$2.04 $\frac{1}{2}$ @ \$2.26 $\frac{1}{2}$	
July	1.91 $\frac{1}{4}$ @ 2.03 $\frac{1}{2}$	2.20 $\frac{1}{4}$ @ 2.31 $\frac{1}{2}$	2.09 @ 2.35 $\frac{3}{4}$	
August	1.99 @ 2.05	2.11 $\frac{3}{8}$ @ 2.23 $\frac{1}{4}$	2.23 @ 2.52 $\frac{1}{2}$	\$1.86 $\frac{1}{4}$ @ \$1.96
September	2.01 $\frac{1}{2}$ @ 2.09 $\frac{1}{2}$	2.12 $\frac{7}{8}$ @ 2.19 $\frac{7}{8}$	2.46 $\frac{3}{4}$ @ 2.86	1.80 @ 1.95 $\frac{3}{4}$
October	2.06 $\frac{3}{8}$ @ 2.11 $\frac{3}{8}$	2.16 $\frac{5}{8}$ @ 2.21 $\frac{1}{2}$	2.63 $\frac{1}{2}$ @ 2.99	1.84 @ 2.03
November	2.09 $\frac{1}{8}$ @ 2.14 $\frac{1}{4}$	2.19 $\frac{1}{8}$ @ 2.32 $\frac{1}{4}$	2.75 @ 3.06 $\frac{3}{4}$	1.86 @ 1.96 $\frac{3}{4}$
December	2.10 @ 2.16 $\frac{1}{4}$	2.24 $\frac{1}{4}$ @ 2.33 $\frac{3}{8}$	2.89 @ 3.03 $\frac{1}{2}$	1.86 @ 1.98
January		2.18 $\frac{1}{4}$ @ 2.27 $\frac{5}{8}$	2.85 $\frac{1}{4}$ @ 3.06 $\frac{1}{2}$	1.90 $\frac{1}{2}$ @ 1.98 $\frac{1}{2}$
February		1.96 $\frac{1}{2}$ @ 2.20 $\frac{3}{4}$	2.29 @ 2.90	1.98 $\frac{3}{8}$ @ 2.40 $\frac{3}{4}$
March		2.12 @ 2.20 $\frac{1}{4}$	2.29 @ 2.52 $\frac{5}{8}$	2.37 $\frac{1}{2}$ @ 2.80
April		2.13 $\frac{7}{8}$ @ 2.26 $\frac{1}{8}$	2.36 $\frac{3}{4}$ @ 2.54 $\frac{3}{8}$	2.41 $\frac{3}{4}$ @ 2.66 $\frac{3}{4}$
May		2.16 $\frac{3}{4}$ @ 2.27	2.40 $\frac{3}{4}$ @ 2.49 $\frac{1}{4}$	2.58 $\frac{1}{4}$ @ 2.85

DECEMBER CORN

	1949	1948	1947	1946
January	\$1.30 $\frac{3}{4}$ @ \$1.36 $\frac{1}{8}$	\$1.84 $\frac{1}{2}$ @ \$1.97		
February	1.00 $\frac{1}{2}$ @ 1.31 $\frac{5}{8}$	1.53 @ 1.90 $\frac{1}{4}$		
March	1.11 $\frac{1}{4}$ @ 1.16 $\frac{1}{4}$	1.54 @ 1.72 $\frac{3}{4}$		
April	1.13 $\frac{1}{2}$ @ 1.18 $\frac{3}{4}$	1.64 @ 1.79	\$1.35 $\frac{1}{4}$ @ \$1.54	
May	1.10 $\frac{3}{4}$ @ 1.18 $\frac{1}{2}$	1.63 $\frac{3}{4}$ @ 1.73	1.38 $\frac{1}{2}$ @ 1.57 $\frac{7}{8}$	\$1.44 $\frac{3}{4}$ @ \$1.46 $\frac{1}{2}$
June	1.11 $\frac{3}{4}$ @ 1.17 $\frac{3}{4}$	1.66 $\frac{1}{2}$ @ 1.73 $\frac{3}{4}$	1.52 $\frac{1}{2}$ @ 1.65 $\frac{3}{4}$	1.46 $\frac{1}{2}$
July	1.15 $\frac{1}{2}$ @ 1.19 $\frac{5}{8}$	1.47 @ 1.68 $\frac{1}{2}$	1.61 $\frac{5}{8}$ @ 1.95 $\frac{1}{4}$	1.36 $\frac{1}{2}$ @ 1.73
August	1.11 $\frac{1}{8}$ @ 1.17 $\frac{5}{8}$	1.36 @ 1.49	1.94 $\frac{1}{4}$ @ 2.30 $\frac{1}{4}$	1.29 $\frac{1}{2}$ @ 1.47
September	1.14 $\frac{5}{8}$ @ 1.19 $\frac{1}{4}$	1.35 $\frac{5}{8}$ @ 1.42 $\frac{5}{8}$	2.10 $\frac{1}{2}$ @ 2.48 $\frac{5}{8}$	1.30 @ 1.44 $\frac{1}{2}$
October	1.15 @ 1.19 $\frac{3}{4}$	1.36 $\frac{3}{8}$ @ 1.44	2.13 $\frac{3}{4}$ @ 2.38	1.32 $\frac{1}{2}$ @ 1.48
November	1.16 $\frac{3}{8}$ @ 1.30 $\frac{3}{4}$	1.36 $\frac{1}{4}$ @ 1.48	2.25 @ 2.62	1.26 @ 1.37 $\frac{3}{4}$
December	1.27 $\frac{3}{4}$ @ 1.32 $\frac{3}{8}$	1.40 $\frac{1}{4}$ @ 1.46 $\frac{1}{8}$	2.50 @ 2.65	1.28 @ 1.37 $\frac{3}{8}$

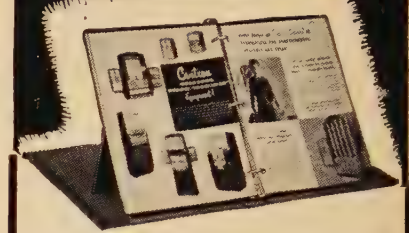
MAY CORN

	1949-50	1948-49	1947-48	1946-47
June	\$1.18 $\frac{7}{8}$ @ \$1.21	\$1.65 @ \$1.74	\$1.49 @ \$1.62 $\frac{5}{8}$	
July	1.19 @ 1.22 $\frac{3}{4}$	1.50 @ 1.68	1.58 $\frac{1}{4}$ @ 1.89 $\frac{3}{4}$	
August	1.15 $\frac{5}{8}$ @ 1.22 $\frac{3}{8}$	1.40 $\frac{7}{8}$ @ 1.52 $\frac{7}{8}$	1.89 $\frac{1}{2}$ @ 2.26 $\frac{3}{4}$	
September	1.19 $\frac{3}{8}$ @ 1.23 $\frac{3}{8}$	1.39 $\frac{3}{4}$ @ 1.46 $\frac{3}{8}$	2.19 @ 2.44 $\frac{1}{4}$	
October	1.19 $\frac{3}{8}$ @ 1.23 $\frac{3}{8}$	1.39 $\frac{1}{2}$ @ 1.45 $\frac{1}{4}$	2.10 $\frac{1}{2}$ @ 2.34 $\frac{1}{2}$	\$1.28 $\frac{1}{8}$ @ \$1.41 $\frac{3}{4}$
November	1.20 $\frac{1}{2}$ @ 1.32 $\frac{1}{4}$	1.40 @ 1.52 $\frac{1}{2}$	2.19 $\frac{1}{4}$ @ 2.56	1.23 $\frac{5}{8}$ @ 1.32 $\frac{1}{2}$
December	1.29 @ 1.33 $\frac{1}{2}$	1.45 $\frac{7}{8}$ @ 1.51	2.44 $\frac{3}{4}$ @ 2.59 $\frac{3}{8}$	1.26 $\frac{1}{4}$ @ 1.32 $\frac{7}{8}$
January		1.39 $\frac{3}{4}$ @ 1.49 $\frac{5}{8}$	2.50 @ 2.70 $\frac{3}{4}$	1.26 $\frac{1}{2}$ @ 1.30 $\frac{3}{2}$
February		1.10 @ 1.40	1.92 $\frac{1}{2}$ @ 2.53 $\frac{1}{2}$	1.30 $\frac{3}{8}$ @ 1.55 $\frac{5}{8}$
March		1.25 $\frac{7}{8}$ @ 1.35 $\frac{3}{4}$	2.07 $\frac{3}{4}$ @ 2.31 $\frac{1}{4}$	1.51 $\frac{1}{4}$ @ 1.88 $\frac{1}{4}$
April		1.31 $\frac{1}{4}$ @ 1.36 $\frac{1}{2}$	2.12 $\frac{5}{8}$ @ 2.34 $\frac{1}{2}$	1.55 @ 1.82
May		1.31 $\frac{3}{4}$ @ 1.38	2.17 $\frac{1}{4}$ @ 2.36 $\frac{1}{2}$	1.59 $\frac{1}{2}$ @ 1.85 $\frac{1}{4}$

DECEMBER OATS

	1949	1948	1947	1946
January	\$0.67 $\frac{1}{4}$ @ \$0.72 $\frac{1}{4}$	\$0.87 $\frac{1}{4}$ @ \$0.95 $\frac{1}{2}$		\$0.69 $\frac{1}{2}$ @ \$0.80 $\frac{3}{8}$
February	.54 $\frac{1}{2}$ @ .67 $\frac{3}{8}$	.76 @ .91 $\frac{1}{2}$		.77 $\frac{7}{8}$ @ .80 $\frac{7}{8}$
March	.57 $\frac{7}{8}$ @ .64 $\frac{1}{8}$	.80 @ .87 $\frac{5}{8}$	\$0.67 $\frac{1}{2}$ @ \$0.73 $\frac{5}{8}$	.76 $\frac{1}{2}$ @ .82 $\frac{1}{4}$
April	.60 $\frac{3}{4}$ @ .64 $\frac{3}{8}$	.82 @ .89 $\frac{1}{4}$	.70 $\frac{5}{8}$ @ .75 $\frac{5}{8}$	.77 @ .82 $\frac{7}{8}$
May	.57 $\frac{7}{8}$ @ .63 $\frac{1}{4}$	.82 $\frac{1}{4}$ @ .86 $\frac{3}{8}$	.72 $\frac{1}{2}$ @ .83 $\frac{3}{4}$	.79 $\frac{3}{4}$ @ .83
June	.57 $\frac{7}{8}$ @ .61 $\frac{3}{8}$	.84 $\frac{3}{4}$ @ .88	.78 $\frac{7}{8}$ @ .88 $\frac{1}{4}$	.81 $\frac{1}{2}$ @ .88
July	.60 $\frac{3}{4}$ @ .61 $\frac{3}{8}$	.74 $\frac{3}{8}$ @ .85 $\frac{3}{4}$	.84 @ .94 $\frac{7}{8}$	.70 $\frac{1}{4}$ @ .90 $\frac{1}{4}$
August	.63 $\frac{3}{4}$ @ .67 $\frac{3}{4}$	.73 $\frac{5}{8}$ @ .77 $\frac{1}{2}$	.91 $\frac{1}{2}$ @ 1.10 $\frac{5}{8}$	.69 $\frac{3}{4}$ @ .75
September	.65 @ .68 $\frac{1}{2}$	.71 $\frac{3}{4}$ @ .75 $\frac{1}{4}$	1.03 $\frac{3}{8}$ @ 1.24	.71 @ .79 $\frac{1}{2}$
October	.67 $\frac{1}{8}$ @ .73 $\frac{1}{4}$	.73 $\frac{3}{8}$ @ .78 $\frac{3}{4}$	1.06 @ 1.23 $\frac{1}{4}$	.73 $\frac{1}{4}$ @ .85 $\frac{1}{4}$
November	.72 $\frac{1}{2}$ @ .78 $\frac{1}{2}$.77 $\frac{1}{8}$ @ .86 $\frac{1}{2}$	1.10 $\frac{7}{8}$ @ 1.28	.72 @ .82 $\frac{3}{8}$
December	.73 $\frac{1}{2}$ @ .78 $\frac{1}{4}$.80 $\frac{1}{4}$ @ .90	1.20 $\frac{7}{8}$ @ 1.29 $\frac{3}{4}$.77 $\frac{1}{2}$ @ .87 $\frac{1}{2}$

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Mercantile Exchange Trading Soars

MORE than quadrupled trading in onions lifted volume on the Chicago Mercantile Exchange in 1949 to the second highest level in the 30-year history of the exchange. Reversing a downward trend of the previous year, trading in futures rose to 151,000 carloads, representing a dollar value of almost \$1,000,000,000. Pacing the market, onion trading accounted for 57 per cent of the year's near-record volume.

Egg futures, usually the principal commodity traded, but this year second to onions, held within a comparatively narrow price range during the first half of 1949. This fairly stabilized price trend was attributed to the fact that supply and demand factors tended to balance during that period. Although spring production was abundant, it was readily absorbed by hatcheries and by huge government purchases of dried eggs. Normally a considerable portion of the spring surplus is placed in storage.

Egg Prices Drop In Fall

In 1949, however, because of uncertainties of fall and winter demand, very little surplus reached refrigerated warehouses. By mid-year it was evident that reserve supplies in storage would be the smallest on record, and futures prices reflected this condition by working irregularly higher until mid-September. At that point the October delivery contract made its high for the year at 56¾ cents a dozen. Fresh eggs became considerably more plentiful than usual during the Fall and tended to deflate the market for storage eggs. In the resulting decline, futures prices tumbled as much as 24 cents a dozen, while fresh egg prices broke from a high of 63 cents to 33 cents a dozen in three months' time.

Activity in butter futures lagged chiefly because of the government butter buying program. Volume de-

clined to less than half its 1948 total. Hedging operations were curtailed, since the butter trade was inclined to protect itself by selling immediately to the government. The government found it necessary to purchase some 110,000,000 pounds of butter to fulfill its obligation to support butterfat at 90 per cent of parity. The November future declined from an early Spring high of 60.25 cents to 55.19 cents, but rebounded in the Fall when business among butter distributors improved.

Onion Trade A Feature

Onions were easily the feature of the 1949 market, with more than 85,000 carloads traded, as compared with 21,000 in 1948. With 30,000 pounds of onions to the car, more than 2,500,000,000 pounds changed hands. Volume of trading was attributed to both a better understanding of the market and hedging possibilities by producers and handlers and a larger speculative interest. The onion futures market climbed sharply during the critical growing season under the influence of adverse crop reports

FUTURES PRICE RANGE

Shell Eggs

(Cents per dozen in units of 14,400 dozen)

	Open	High	Low	Close
April, 1949	46.50	49.75	46.50	49.75
Oct., 1949	44.90	56.75	44.80	53.00
Nov., 1949	47.90	53.50	41.85	50.15
Dec., 1949	47.50	49.05	35.00	38.75
Jan., 1950	46.00	46.00	27.50	27.85

Butter

(Cents per pound in units of 19,200 lbs. for Mar., 1949, — 20,000 lbs. for later deliveries)

	Open	High	Low	Close
Jan., 1950	58.50	61.00	54.75	60.50
March, 1949	60.50	58.50	62.00	58.25
Nov., 1949	60.00	60.25	55.75	59.50

Onions

(Per 50-lb sack in units of 30,000 lbs.)

	Feb., 1949	March, 1949	Nov., 1949	Jan., 1950
Open	\$2.31	2.00	1.30	1.60
High	\$2.32	2.09	3.85	4.25
Low	\$.84	.79	1.26	1.40
Close	\$1.04	1.55	3.08	1.47

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and forecasts of a sizeably smaller crop than last year.

On September 1st some 2,200 carlots traded hands — more than any one day's trade in all commodities in the mart's history. Futures prices reached a peak in late Summer when the January delivery rose to \$4.25 and the March future reached \$5.50 per 50-pound sack. During the Fall, however, markets made a complete about-face as the harvest exceeded the most optimistic expectations. As a result, the January, 1950, contract slumped to \$1.95 while the March

1950 delivery contract dipped to \$2.45 per sack.

In June 1949, the exchange added futures contracts in dressed poultry. The institution of a government support program in late June severely curtailed futures trading, but totals of more than 12,500,000 pounds were considered good for a new futures contract. Late in 1949, the exchange also began extensive improvements to its floor facilities, which have now been almost completed. These include new trading boards, improved lighting, an acoustical ceiling, and air conditioning.

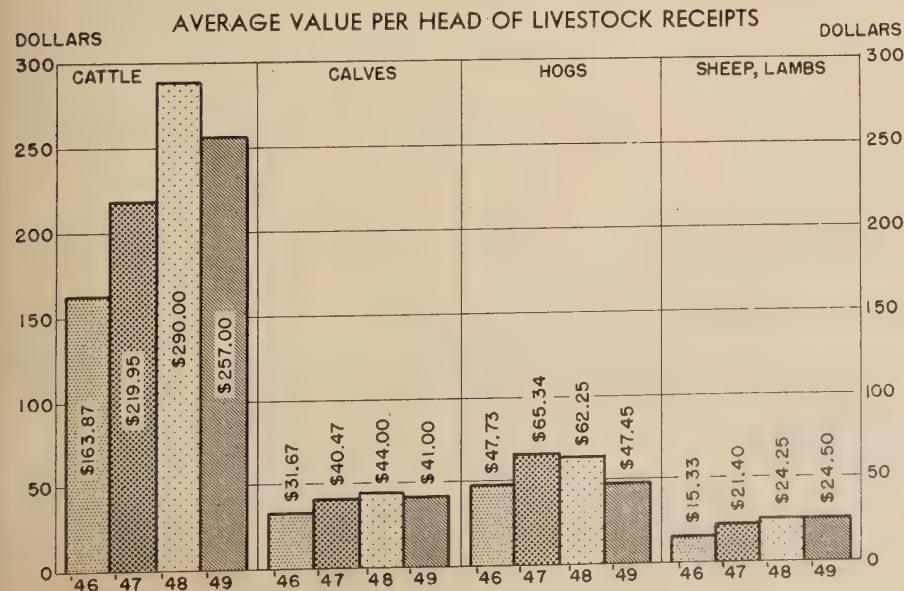
Meat Production Up

MEAT production reached an unusually high level in the United States last year. Livestock raisers turned out some 22,636,000,000 pounds of meat on the hoof, exceeding their 1948 production by slightly more than one billion pounds. Meanwhile, meat exports dropped to a low figure of 100,000,000 pounds, with the result that the United States actually imported more meat last year than it exported.

Heavy production exerted itself in the livestock markets where meat prices during 1949 dropped sharply below the preceding year's levels. As a result, the total value of cattle, calves, hogs, sheep and lambs slaughtered during the year, including animals butchered on farms,

was estimated at \$8,359,889,000. This figure compared with \$9,569,584,000 in 1948, the highest such figure on record, and with \$9,496,751,000 in 1947. The declining price level meant that even with a billion more pounds of meat produced in 1949, the total value of this output was below the 1948 level.

The largest gain in production was in hogs; almost 1,000,000,000 pounds more pork was brought to market in 1949. Pork tonnage increased to 11,120,000,000 pounds, lard excluded, as compared with 10,246,000,000 pounds the previous year. In only three years in history has there been a greater volume of pork and two of them were war years. The gain in output of beef



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over 1948 was mostly offset by the decrease in veal, lamb and mutton.

Production of lard in 1949 was 2,700,000,000 pounds, largest in five years, against 2,368,000,000 pounds in 1948. In only three years of record was lard production heavier.

Beef output totaled 9,640,000,000 pounds in 1949 and 9,181,000,000 pounds in 1948. In only two years was beef production heavier and the record high was 10,428,000,000 pounds in 1947.

Less Veal Produced

There were 113,000,000 pounds less of veal produced in 1949 than in 1948. The total of 1,306,000,000 pounds was the smallest in six years. Production of lamb and mutton amounted to only 570,000,000 pounds, the smallest since 1922.

The sheep and lamb industry continued to suffer from the effects of the war. A shortage of experienced men to tend flocks on the range, plus OPA restrictions on prices at a critical time, caused a general liquidation of breeding stock during and since the war years. There are signs now, how-

ever, that flocks are being rebuilt.

Meat experts believe that production of all meats will increase in 1950. There is need for larger production because of gains in population and the ability of more people to buy meat.

All classes of meat animals, except sheep and lambs, sold for less money per head and per hundred pounds in 1949 than in 1948. Cattle were valued at \$3,875,975,000 in 1949 and \$4,283,400,000 in 1948; calves at \$545,184,000 as compared with \$624,841,000 the year before; and hogs at \$3,653,550,000 in 1949 against \$4,308,289,000 in 1948.

While the average price of cattle in 1949 at \$25.90 was down \$5.45 from the previous year's average, the sharpest reduction on record during a year, a new top of \$43.50 was paid for some prime steers and it was the third highest cattle average for all time. The market was weakest during the early months of the year and staged a surprising comeback in the Fall months.

The average price of hogs in the Chicago market for the year was \$5.25 a hundredweight below that

of 1948. This was one of the sharpest declines in the history of the trade. The year's average dropped to \$18.25 but compared favorably with previous years with the exceptions of 1948 and 1947.

Hog Receipts Rise

The Chicago Stock Yards handled the largest hog receipts in three years and forecasts are that the current year will see a still larger movement. The price break, which brought the level down to the government support basis at times, is not expected to curtail production of hogs since the corn belt states at the close of 1949 held big stocks of corn for livestock feeding.

Farmers marketed hogs at lighter than usual weights the past year, despite the huge amount of corn available for feed and the favorable corn-hog price ratio which prevailed most of the year. Uncertainty and the fear of a severe decline in prices kept hogs flowing to market at relatively light weights. Quality of hogs was high throughout the year.

Receipts of livestock at Chicago as published in the annual report by Union Stock Yards and Transit Company of Chicago; and valuation of various species:

CATTLE

	No. of Head	Value
1949	1,850,491	\$472,880,120
1948	1,694,195	490,966,520
1947	2,089,433	459,580,537
1946	1,959,549	321,109,070
1945	2,390,676	336,771,282
1944	2,339,829	286,835,566
1943	2,143,129	295,948,020

CALVES

1949	164,104	\$6,683,384
1948	187,645	8,288,028
1947	271,229	10,975,610
1946	194,243	6,151,128
1945	229,584	6,241,725
1944	287,335	7,485,579
1943	216,899	5,779,791

HOGS

1949	3,425,252	\$162,204,175
1948	3,341,707	205,776,650
1947	3,317,949	216,796,532
1946	3,541,340	169,022,074
1945	3,516,182	139,597,700
1944	6,018,098	205,857,771
1943	5,791,541	216,839,342

SHEEP AND LAMBS

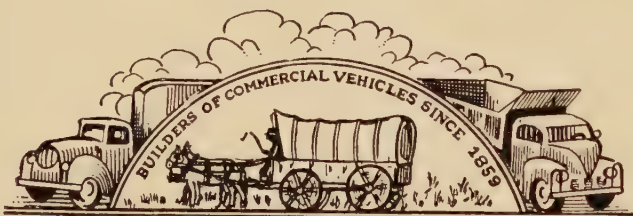
1949	622,862	\$15,190,186
1948	888,447	21,393,447
1947	968,094	20,718,750
1946	1,486,733	22,785,621
1945	1,874,566	24,061,185
1944	2,055,797	24,895,772
1943	2,389,871	30,313,204

AVERAGE VALUE PER HEAD OF LIVESTOCK RECEIPTS AT CHICAGO

	1949	1948	1947	1946
Cattle	\$257.00	\$290.00	\$219.95	\$163.87
Calves	41.00	44.00	40.47	31.67
Hogs	47.45	62.25	65.34	47.73
Sheep,				
Lambs	24.50	24.25	21.40	15.33

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Korth photo

Chicago strengthened its claim to the title "commercial printing center"

Printing Volume Off Slightly

CHICAGO'S huge printing and publishing industry experienced another high-volume year in 1949, although both sales and tonnage volume did drop off from the exceptionally high levels of the previous year. The Graphic Arts Association of Illinois estimates that tonnage volume for 1949 dipped about five per cent below 1948, while dollar sales are estimated to have declined to \$675,000,000, as compared with \$682,000,000 in 1948. In 1947, estimated dollar sales for Chicago area plants amounted to \$650,000,000.

The decline in printing and publishing volume was generally attributed to a nationwide decline in magazine advertising linage and circulation, both factors tending to diminish the number of actual pages printed during the year.

Employment in the industry, in Chicago as well as throughout the nation, also turned downward during the year. Not only were fewer persons employed, but overtime work

also declined. This decline continued a trend that began in October, 1948, and by November, 1949, total printing and publishing employment in the Chicago area had fallen to 70,100 from 76,700 a year earlier. The latter statistics are estimates of the Illinois Department of Labor.

Few Employment Gains

Of the many segments of the city's printing and publishing industry, only newspapers and periodicals showed employment gains in 1949. This upturn came after the end of the 22-month typographical union strike in September, 1949.

Chicago continued, however, to strengthen its claim to the title of "commercial printing center" of the nation during 1949. Unlike many other industries, printing and publishing includes an exceptionally wide variety of enterprises. So far as the overall industry is concerned, New York continues to outstrip Chicago by a wide margin, largely

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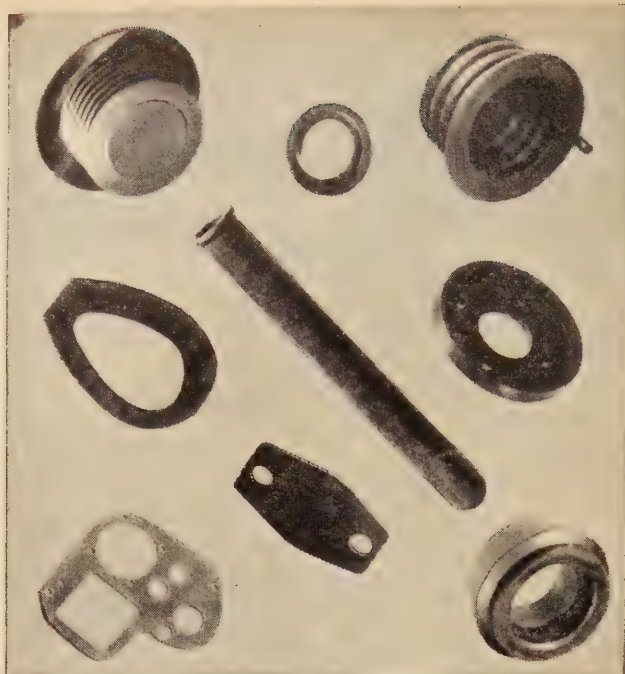
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because the New York-Northeastern New Jersey area is the world's principal center of newspaper, periodical and book publishing.

In the field of commercial printing, however, New York and Chicago could both make a case for leadership. Chicago is the home of the world's three largest commercial printing enterprises: the Cuneo Press, Inc., W. F. Hall Printing Co., and R. R. Donnelley & Sons. The three firms handle the bulk of the larger national printing contracts for major magazine, mail order house catalogues, and business and telephone directories. From Chicago presses come such highly circulated magazines as Life, Time, Cosmopolitan, Good Housekeeping, Liberty, Harper's Bazaar, House Beautiful, Esquire and Coronet. In addition, the city's presses turn out a tremendous volume of pulp magazines and paper-covered "pocket" books. One firm alone turned out some 127,000,000 of the latter in 1949.

Comparison With N. Y.

Actual statistics, however, are meager in the commercial printing field. According to the most recent Census of Manufacturers in 1947, New York had 1,987 commercial printing houses while Chicago had only 852. Oddly, however, the Chicago houses employed more printers and had larger payrolls, but in terms of what statisticians refer to as "value added to product" New York was a trifle ahead of Chicago. Lacking accurate current statistics, it is anybody's guess how the two cities stand today.

As was the case in most other industries, Chicago's printers and publishers tended to spend less last year for plant improvements than they had in early post-war years. Many large-scale modernization projects have now been completed, bringing virtually to a conclusion one of the biggest expansion programs in the history of Chicago's printing and publishing industry.

Some indication of this tremendous growth is indicated by the fact that the Territorial Information Department estimates that in the period 1945 through 1949 an estimated \$42,156,000 was spent for printing plant and equipment in the Chicago area. Peak of the expansion came in 1947 when the investment was \$24,186,000.

Utilities Make Big Expansion

THE demand for Chicago's public utility services—electricity, gas and telephone—continued last year at or above the record levels established in 1948. The fact that this consistently strong demand prevailed despite a reduced tempo of general industrial activity reflected a continuing uptrend in the area's residential and industrial population.

Meanwhile, all three of the area's utility companies moved toward the completion of gigantic postwar expansion programs.

ELECTRICITY

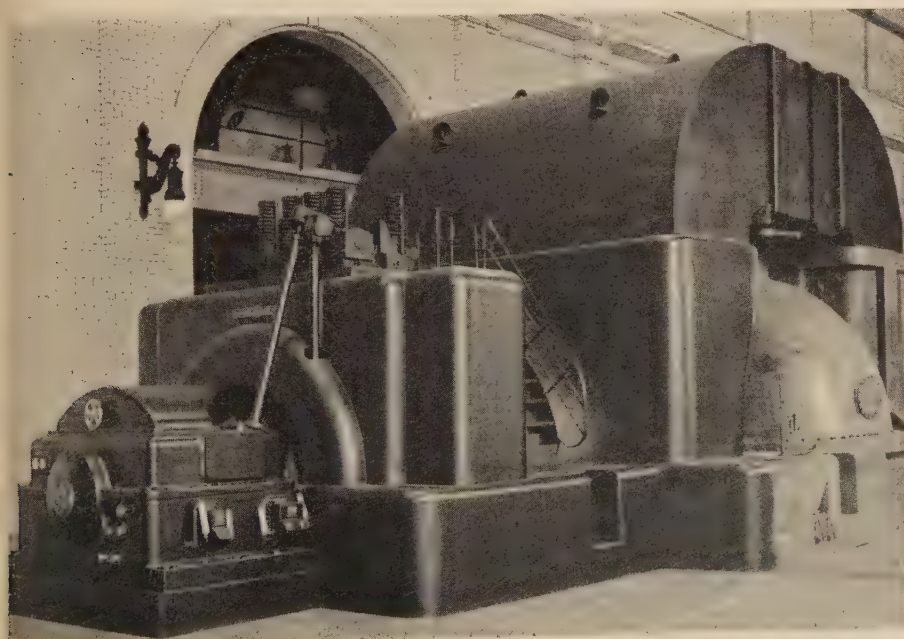
ONE day last July a huge electric generating unit, using a new type furnace, aptly called the "cyclone," swung into action at Commonwealth Edison Company's Fisk generating station. As the new furnace began the process of converting coal into electric power at the most efficient ratio yet attained, another landmark was passed in the greatest expansion program in the history of the group

of utilities which serve some 1,500,000 electric customers in Chicago and Northern Illinois.

With the new 150,000 kilowatt generating unit brought into service at the Fisk Station, the second of six major expansion projects, which ultimately will add 774,000 kilowatts to the system's total generating capacity, was completed. The first 107,000 kilowatt unit went into operation at the Calumet station in 1947. The new Fisk unit brought the system's total generating capacity, as of December 31, 1949, to 2,545,000 kilowatts.

In addition to the new Fisk unit, attention also centered upon Commonwealth Edison's new Ridgeland Station where two generating units, each of 150,000 kilowatt capacity, were in the course of construction in 1949. More than 2,000 men were at work on the station, which alone will have sufficient generating capacity to serve a city of 600,000 population.

One generating unit at Ridgeland is scheduled to be in service late in 1950 and the second in 1951—more than four years after



New 150,000 kilowatt turbo-generator at Fisk station of Commonwealth Edison

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preliminary work began. Ridgeland is being designed so that additional units can be economically added to its basic facilities when necessary, to raise its capacity from 300,000 to 600,000 kilowatts.

Ridgeland will also be the nation's first electric generating station to be fully equipped with the cyclone-type furnace which efficiently burns crushed rather than powdered coal. In addition, Ridgeland's two generating units will consume less than one-third the amount of coal per kilowatt-hour produced than is consumed by Edison's oldest units.

Statistics On Plant

Some idea of the size of the Ridgeland construction work can be gained from these statistics: the project requires 11,000 tons of structural steel, 6,000 tons of reinforced steel, 2,200 tons of steel sheet pilings, and about 100,000 cubic yards of concrete (enough to build a 32-mile, two-lane highway). When completed, the two Ridgeland units will burn 180 tons of coal per hour and be served by a storage yard holding half a million tons of fuel.

Work also progressed last year on two other building projects in the system: a 107,000-kilowatt unit at the Joliet Station of the Public Service Company of Northern Illinois (which went into service in February, 1950), and a 110,000-kilowatt unit at the Waukegan Station of the same company. The latter unit is scheduled for completion in 1952.

Meanwhile, last year, total electricity sales of the group which in addition to the Public Service Company of Northern Illinois includes Western United Gas and Electric Company and Illinois Northern Utilities Company, closely approximated the all-time record level of the preceding year. Significantly, total electricity demand continued at this exceptionally high plateau despite a general decline in industrial activity in the Chicago area. The continued growth of the Chicago area, from both an industrial and residential standpoint, was partly responsible for holding electricity demand at this level.

GAS

GAS consumption by general customers of the Peoples Gas Light and Coke Company in the Chicago area again moved upward in 1949, reflecting a steadily increasing demand upon pipeline facilities in the mid-continent area. Total gas sales to the company's general customers reached 516,822,028 therms during the year, an increase of slightly more than 11 per cent over 1948.

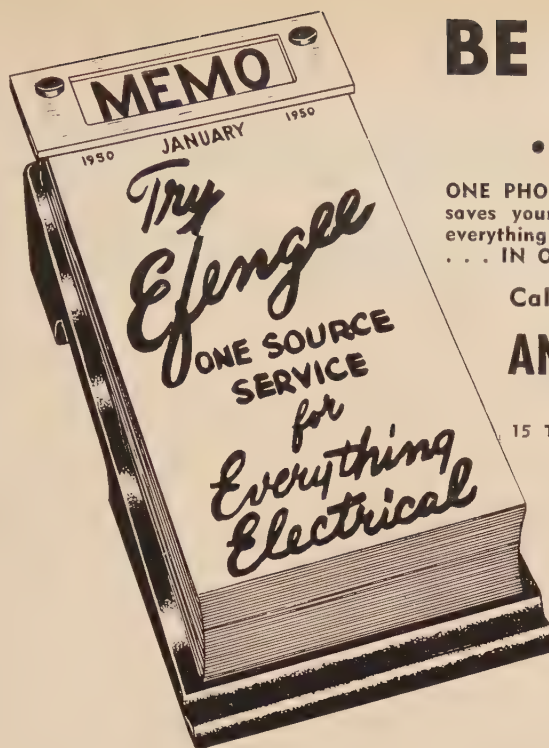
But, despite the fact that gas availability in the Chicago area was increased last year by the completion of a second pipeline to the Texas-Oklahoma area, some 48,000 families who had asked for gas for home heating still remained on the waiting list for service at the end of 1949. This steadily increasing demand spurred efforts to raise capacity by the addition of a third pipeline, extending from the lower tip of Texas to Joliet, Ill.

New Pipeline Company

In July, 1949, the Texas Illinois Natural Gas Pipeline Company, a newly formed subsidiary of Peoples Gas, filed application with the Federal Power Commission seeking authority to build the new pipeline and hearings on the application were to begin in February, 1950. Also, late in 1949, sufficient reserves were obtained in the Gulf Coast area of Texas to supply the initial needs of the 1,200-mile third line, which initially is expected to have a delivery capacity of about 300,000,000 cubic feet daily. Ultimately, as compressor capacity is added, it is planned to have a capacity of 500,000,000 cubic feet daily. The latter is equal to the output of the present dual pipeline system which serves the Chicago area.

Commenting upon the increasing demand for gas, Peoples Gas declared, "Studies indicate that Chicago and the other areas supplied by Natural (Gas Pipeline Company of America) will require the very impressive total of about one billion cubic feet of natural gas daily by the winter heating season 1956-1957."

The year 1949 was also significant for the Peoples Gas Light and Coke Company in that it marked



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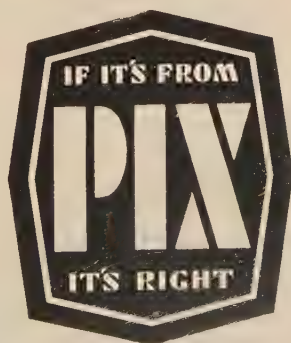
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the first full 12-month period during which it was the principal participant in a completely integrated natural gas system. In December, 1948, Peoples Gas had completed its purchase of all of the remaining outstanding shares of the capital stock of Natural Gas Pipeline Company of America and Texoma Natural Gas Company (in which it had held minority stock interest since 1931). Thus, in 1949 Peoples Gas became the major company in a system serving customer companies in a six state area with a combined population of more than 6,300,000 persons.

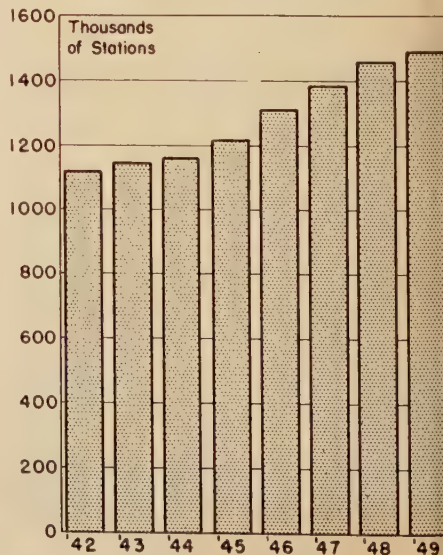
TELEPHONES

ONE amenity of modern, peacetime living returned to the Chicago area last year. For the first time since the war, you could call the telephone company requesting that a phone be installed in your home and — in the great majority of cases — find the familiar green service truck drawing up to your door the next day.

The biggest expansion program in the history of the Illinois Bell Telephone Company had finally brought back "next day service" for virtually all telephone customers in the Chicago area. After eight years of long waiting lists, the number of unfilled orders for telephone service had been reduced to about 9,000 at the end of 1949, compared with a peak of 103,000 four years earlier. Last year's level was not quite down to the telephone com-

(Continued on page 110)

TELEPHONES IN USE

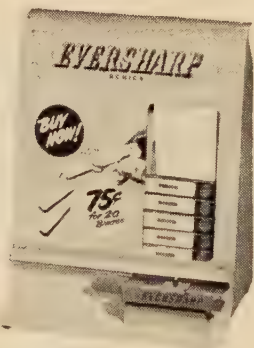


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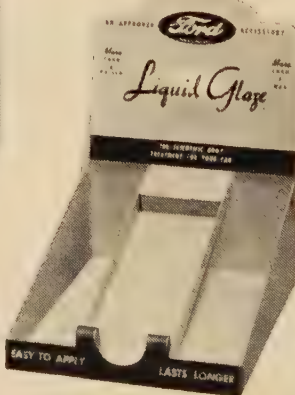


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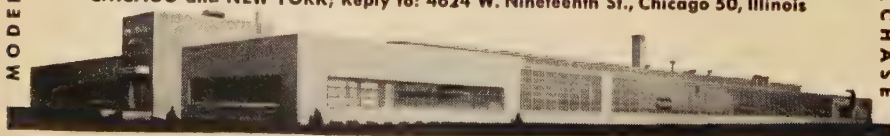


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Candy Industry

(Continued from page 64)

also marked a decline from 1947's \$956,000,000. Despite last year's decline, however, most candy makers believe the 1950 industry outlook is as bright.

Chicago's position as U.S. candy capital was acknowledged in the most recent Census Bureau survey of manufacturers in 1947. Of the 1,686 confectionery manufacturers in the nation, 141 are in Illinois, 123 of these in Cook County. Illinois producers account for 31.72 per cent of total U. S. candy dollars, with Chicago firms providing 29.18 per cent of the state total. Nearest competitor is New York state which produces 11.85 per cent of total U. S. candy at wholesale, with New York City accounting for 9.3 per cent.

Drop Sharper Than For U.S.

An odd trend in the candy industry is the fact that Chicago and statewide producers have been experiencing somewhat steeper declines — both in volume and in dollar sales — during the past few years than have competitors in other areas. Sales of 46 leading Illinois producers declined an estimated 14 per cent between 1948 and 1949, while 266 major producers throughout the country reported a sales drop of only 12 per cent. (Estimates based on ten months figures for 1949.)

In a study of 291 identical candy manufacturers for the years 1947 and 1948, the Department of Commerce took particular note of the Illinois trend. This study involved 47 firms doing 77 per cent of the total manufacturing volume for the state. Poundage sales of the 47 Illinois firms dropped 4.8 per cent in 1948 and dollar sales dropped 7.8 per cent, while countrywide sales as a whole rose 3.2 per cent in 1948 in volume and 6.5 per cent in value.

The same survey showed that Illinois producers priced their candy below the national average. The average price per pound of the 47 Illinois firms was \$.314 in 1947 and \$.304 in 1948 against a national average of \$.367 and \$.375 in 1947 and 1948, respectively.

These figures, however, are not as alarming as they may appear.

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Part of the decline shown by Illinois candy makers has been due to fire losses suffered by one of the state's largest candy companies. This Chicago firm estimates its direct fire losses at 15,000,000 pounds of production in the last four months of 1948 and 5,000,000 pounds in the first half of 1949.

Another reason for the disproportionate sales decline of Chicago candy makers is the heavy concentration of five-cent bar producers in the area. In 1948 national sales of five cent bars were down 14 per cent in terms of pounds and more than half of Chicago's candy output is in bar goods.

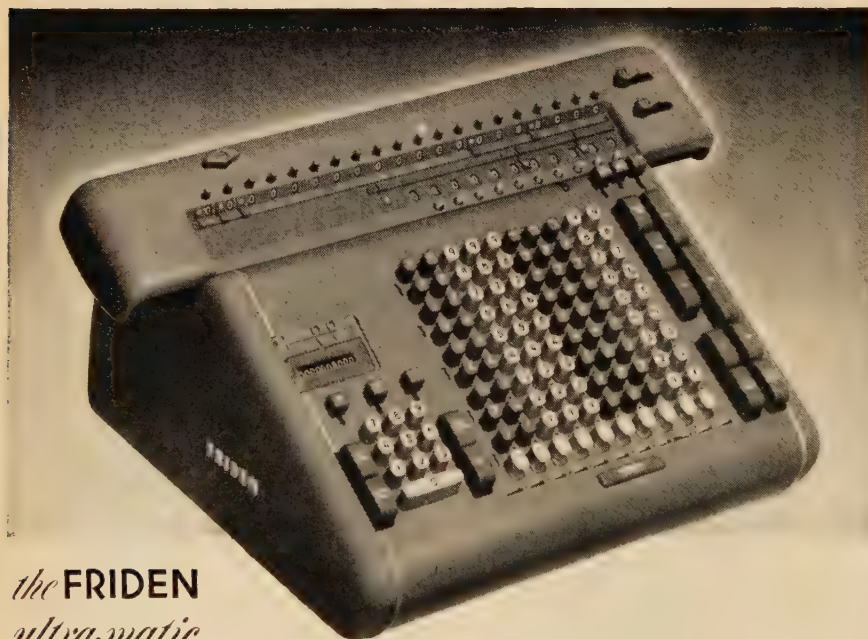
Employment in the confectionery and related products industries in the area of Cook, DuPage and Lake (Ind.) counties averaged 17,400 in the first quarter of 1949. Later statistics are not available. This was off from 1948's average employment of 18,200. Later figures are expected to bring the 1949 average up, inasmuch as the candy industry enjoyed a heavy volume in the last quarter of 1949.

Steel Industry

(Continued from page 57)

ready have been mentioned, others of importance are as follows:

Carnegie-Illinois Steel Corp. Completed construction early in 1949 of a new battery (No. 16) of 77 coke ovens at Gary Steel Works which will increase coke production 1,000 tons per day, started rebuilding No. 13 coke oven battery, to be finished early next year, and initiated construction of large sintering plants at the Gary and South Chicago steel plants to process powdery iron ore to useable size and to recover iron from blast furnace flue dust. These are scheduled for completion during 1950. At its Gary Sheet and Tin Mill, the company modernized its 80-inch hot strip mill, a three-stand cold reduction mill and put into production a new 48-inch continuous terne coating line. A 48-inch continuous strip galvanizing line to replace some existing facilities is being completed. Carnegie-Illinois has also announced a new program designed to increase production of cold-reduced sheets in the Chicago district by about 200,000 tons a year.



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National Tube Co.: Completed installation of 13 new furnaces at Gary, Ind., plant for heating pierced seamless steel tubes so they can be rolled to specified sizes. An additional seamless mill will be built soon at Gary.

American Steel & Wire Co.: Placed in operation at Waukegan its new stainless steel wire mill. With a capacity of 500 tons per month, it is one of the largest stainless steel wire producers in the country. Product will be rounds 1/2-inch and finer and certain sizes of flats.

Inland Steel Co.: Spent \$25 million last year toward its \$125 million postwar expansion program. Still has under construction the new battery of 65 coke ovens at Indiana Harbor. Work is continuing on the modernization which will increase steel ingot production by 600,000 tons, or 17 1/2 per cent by 1951.

Youngstown's Expansion

Youngstown Sheet & Tube Co.: Has scheduled for completion by midyear 1950 its new butt-weld pipe mill at Indiana Harbor to produce sizes from 1 to 4 inches diameter. When operation starts, the company will discontinue production of lapweld pipe in the Chicago area. The new facilities will include two galvanizing units.

The f.o.b. mill system of steel pricing plus the impact of steadily rising freight rates are encouraging metalworking manufacturers to transfer present operations or to establish new ones at points close to steel supply. For the most part, such movements have been toward centers where more steel is produced than is consumed. Chicago is not in this category, nevertheless, it is benefiting to some extent by such migration. An example is the recent announcement by the Budd Co., Philadelphia, that it will build a stamping and assembly plant in Gary for the manufacture of auto bodies and parts for its customers in the Chicago area. Heretofore, the fabricating of body parts for these customers has been carried on in the company's Detroit plant.

This trend is bound to continue unless Congress gives approval to some acceptable form of freight absorption.



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Reviews of Middle-western Companies

By DANIEL F. NICHOLSON

SHORTLY after World War II ended in 1945, Nash-Kelvinator Corporation launched the most extensive program of expansion and improvement in its history. Factories were remodeled, enlarged and modernized, additional plants were purchased or constructed at Kenosha and Milwaukee, Wis., Grand Rapids and Detroit, Mich., El Segundo, Cal., and Toronto, Canada.

Expensive new equipment was installed, and the company spent additional millions for the design of new automobile and electric appliance models, and for tools to produce them. In the aggregate expenditures for new plants, equipment and tools in the period from October 1, 1945, to September 30, 1949, amounted to \$44,795,526. In addition the company made available to certain of its foreign and domestic subsidiaries a total of \$5,971,896.

Improvement And Expansion

These large expenditures were in part necessary to expand plant capacity to meet the vast accumulated demand for automobiles and electric appliances, but they also improved the company's position for the inevitable return of strong competition by establishing a better balance in production capacity and a reduction in manufacturing costs.

Competition did return last year to the fields in which Nash-Kelvinator operates. The company's annual report for the fiscal year to September 30, 1949, stated: "Competition became keener as the year progressed. Consumer preference, based upon product design, quality and price, again became the foremost consideration in achieving volume production and sales."

Recently Nash-Kelvinator announced its intention to introduce

a third series of cars in a price field lower than that of its present Statesman models. The company did not state just how low the price of the forthcoming cars will be, but there have been broad hints that they would be competitive with Chevrolet, Ford and Plymouth.

The \$1,000 Car?

Even more recently Nash-Kelvinator has received a great deal of attention by showing publicly the prototype of a \$1,000 Nash car. George W. Mason, president of the company, said Nash may manufacture this car if there is a prospect for annual sales of 100,000 units. The car is a two-passenger, European type vehicle, stripped of every accessory that can be dispensed with. If a decision is made to produce the car, about a year would be required to put it in production, Mason said.

The Nash Motors Division of the company now manufactures two series of passenger cars. The Ambassador series in the medium price field, and the Statesman series (formerly the "600") in the low-medium price range. During the 1949 fiscal year, this division produced a record 139,521 cars, an increase of 16 per cent over the preceding year despite a severe interruption to production at the height of the selling season because of a prolonged strike at a supplier's plant. The 1949 fiscal year's output was helped by the opening of the new assembly plant in El Segundo, Cal., in October, 1948. The principal Nash automobile plants are in Kenosha and Milwaukee, Wis.

The Kelvinator Division manufactures electric refrigerators, ranges, home freezers, and such commercial products as vending machines, beverage coolers, ice cream cabinets, and condensing units. The appliances are marketed under the trade-name "Leonard,"

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Output of household appliances by the Kelvinator Division was at a new high during the 1949 fiscal year at 620,060 units, but its commercial appliance production fell below the 1948 peak because many independent manufacturers using Kelvinator commercial condensing units in home freezers, vending machines, water coolers, and so on experienced a sharp decline in demand for their products. Dollar sales of appliances for the fiscal year were down 2.3 per cent from the all time record set in 1948.

Nash-Kelvinator has five unconsolidated subsidiaries, Kelvinator of Canada Limited (75.81 per cent owned), Kelvinator Limited, England (100 per cent owned), Nash Motors of Canada Limited (100 per cent owned), Refrigeration Discount Corp., a 100 per cent owned finance company and Ranco Incorporated (61.67 per cent owned). These companies did the largest volume of business and reported the best earnings in history in fiscal 1949. Dividends of \$636,735 are included in the corporation's 1949 income, while its share of their 1949 profits, not included in income, was \$1,856,181.

Formed By Merger

Nash-Kelvinator Corporation as constituted today is the result of a merger early in 1937 of Nash Motors Company and Kelvinator Corporation. Its story from then to the present divides naturally into three parts. Approximately four years were devoted to developing new autos and appliances and improving old ones. Nash Motors introduced its "600" series of cars, now the Statesman series, in October, 1940, to compete in the low-medium price field. Kelvinator and Leonard appliances were given a thorough going-over from the triple standpoints of design, engineering and manufacture. The result in both 1940 and 1941 was that the Nash and the Kelvinator divisions showed a greater rate of gain in sales than did the automobile and appliance industries as a whole.

Net sales, earnings, and working capital established new records in the fiscal year ended September 30, 1949. Sales were \$364,193,360, an

increase of 20 per cent over 1948. Net earnings amounted to \$26,229,930, equivalent to \$6.04 a share on the 4,341,109 shares of common stock outstanding, compared with \$20,132,954, or \$4.63 a share, in the preceding year. The following table shows sales, earnings and dividends for the past ten years:

Years ended Sept. 30	Sales	Net Earnings	—Per Share— Earnings	Dividends
1940	\$ 73,489,574	\$ 1,505,151	\$0.35	\$—
1941	122,045,258	4,617,052	1.07	0.25
1942	82,061,475	3,828,755	0.89	0.50
1943	184,936,361	4,115,550	0.96	0.50
1944	274,436,332	3,065,290	0.71	0.50
1945	183,050,533	2,492,638	0.58	0.50
1946	121,556,012	2,582,274	0.59	0.50
1947	250,262,581	18,097,697	4.16	0.87½
1948	302,860,264	20,132,954	4.63	1.40
1949	364,193,360	26,229,930	6.04	1.40

Net working capital at September 30, 1949, stood at \$71,822,366 compared with \$63,777,477 a year earlier and \$38,929,529 at the end of the war.

Dividends Conservative

A comparison of annual dividend disbursements with per share earnings shows the conservatism of the company's dividend policy during the past four years of large earnings. A large proportion of net income was retained in the business to improve plants, products and financial strength, at the temporary sacrifice by stockholders of a high dividend return which could have been justified by earnings. At their meeting December 1, 1949, however, directors declared a special dividend of 75 cents for the first quarter of the 1950 fiscal year, in addition to the regular payment of 35 cents per share. This is interpreted as probably indicating a more liberal dividend policy in the future, based upon the probability that the company's major postwar capital needs have been taken care of. Capital requirements for the introduction of the new series of cars to be introduced this spring, and the more distant possibility of additional capital needs should the company decide to produce its much-talked-about \$1,000 car, must be reckoned with, however, in appraising the company's dividend outlook.

The company's report for the quarter ended December 31, 1949, first in the current fiscal year, showed net earnings of \$4,215,849, or 97 cents a share, as compared with \$5,859,289, or \$1.35 a share,

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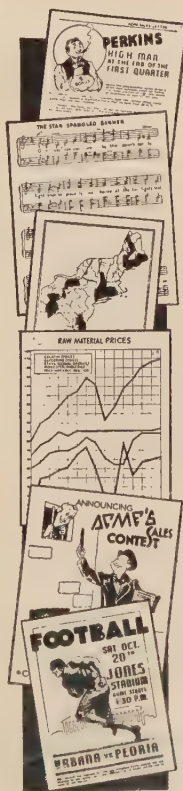
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in the like quarter a year ago. Automobile production was suspended for three weeks in November because of the steel strike and for the balance of the quarter ran at only 400 per day compared with 700 daily before the strike.

As of September 30, 1949, Nash-Kelvinator had long term debt outstanding in the amount of \$20,000,000, payable at the rate of \$2,000,000 annually from 1954 to 1961, and \$4,000,000 on September

30, 1962. During the 1949 fiscal year the company reduced its long term debt by \$10,000,000, of which \$8,000,000 represented the prepayment of installments due over the coming four years.

Capital stock of the company consists of an authorized 5,000,000 shares, \$5 par value per share, of which 4,341,109 shares are outstanding. The stock is listed on the Midwest Stock Exchange and the New York Stock Exchange.

Utilities Make Big Expansion

(Continued from page 102)

pany's "normal" backlog of three to four hundred service requests, but even delayed orders were being accommodated in a matter of days.

Also last year, the telephone company speeded up its servicing of many other types of customer requests, for example, those asking single and double-party lines. The backlog of such service requests was pared from 100,000 to 62,000 during the year. Meanwhile, the number of telephones in operation

in the territory served by Illinois Bell reached a new high of 2,495,000, representing a net gain of 93,000 during the year. Residential installation accounted for 82 per cent of this increase.

The telephone company's \$93,800,000 investment in new plants and equipment in 1949 was the second largest in its history and brought the total outlay for expansion in the last four years to \$339,000,000. The annual record

for this period was reached in 1948 when \$112,400,000 was thus spent.

The major building projects completed during the year included the new Irving and Stewart exchange buildings; additions to Beverly and Edgewater exchange buildings and the large warehouse occupied jointly with Western Electric Company, and the new South Coin Center, designed to handle all phases of public telephone operations.

Outside Chicago, completed projects included new exchange buildings at Highland Park, East Moline, Wheaton, Libertyville and Glenview, and building additions at Oak Park, Cicero and Springfield.

While the bulk of Illinois Bell's postwar investment has been aimed at improving telephone service, the company has also been accommodating special service needs of industry. The company is working jointly with its parent organization, American Telephone and Telegraph Company, on the construction of two radio relay systems, Chicago-New York and Chicago-Omaha.

In 1949, the company also in-

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creased the number of special circuits for transmitting TV programs. These included channels for local television broadcasting and microwave links between Chicago telecasting studios and football stadiums at Urbana and Evanston.

In the experimental field, Illinois Bell is installing a limited number of new telephones with an improved dial, a more pleasing ring and better speaking and hearing qualities.

LOCAL TRANSPORTATION

THE Chicago Transit Authority continued its campaign last year to pare minutes off the daily traveling time of the city's vast body of rapid transit patrons. The CTA wound up its second full year of operations with a major part of its rapid transit system converted to all-express, skip-stop service and with some 822 single-way miles of surface routes equipped with modern streetcars and buses. Skip-stop service — introduced on Lake street lines in 1948 — was extended to the North-South lines last year.

By the end of the year, 55 per

cent of the rides originating on the surface system, where the CTA's equipment modernization program has been concentrated, were using modern equipment. Also during 1949 new bus service replaced streetcar operations on 73.7 miles of route, bus service was extended on 14.04 miles of route, and modern streetcars were placed on one additional route. Among the bus routes established in place of streetcar service were North Avenue, Fullerton Avenue and Belmont Avenue.

Improved earnings of Illinois Bell in 1949 reflected a second postwar rate increase which was granted last year. The Illinois Commerce Commission authorized higher rates in October to yield \$22,800,000 in increased revenues. In Indiana a temporary rate increase, amounting to \$1,000,000 annually, went into effect April 1. These brought the total postwar improvement in revenues from rate adjustments to 26 per cent.

CTA expenditures for the mod-

ernization of equipment and other facilities had reached a total of \$42,445,000 by the end of 1949, approximately \$5,000,000 having been spent during the year for new facilities, including modern shop tools and equipment, overhead power line installations for trolley buses, off-street terminals and direct surface-"L" transfer connections, and a new bus garage at 103rd St. and Vincennes Ave.

Payments totaling \$756,000 were made on the \$4,700,000 purchase price of 130 all-metal subway-elevated cars scheduled for delivery starting next April. The cars are to operate on the Milwaukee-Dearborn-Congress subway beginning late in 1950.

The transit authority failed by approximately \$9,700,000 to meet that part of its \$150,000,000, 10-year modernization program scheduled for 1949. The failure was attributed to lack of funds, and as a result efforts were underway at the end of 1949 to obtain new financing in order to complete the projected modernization program by 1957, as scheduled.

Late in 1949, the CTA increased



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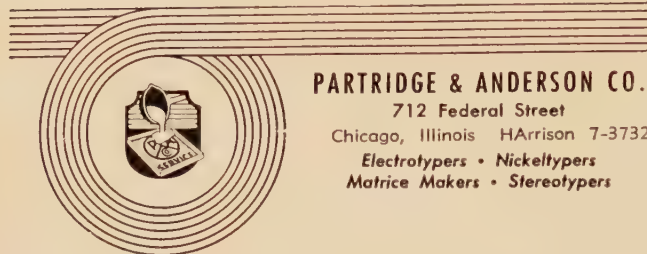
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fares two cents on both the surface system and the rapid transit system, contending that rising labor and materials costs, plus a decline in transit patronage, made the increase necessary. Inter-city through fares was not affected.

Earlier in the year CTA authorized a 10-cents-an-hour wage increase for its employees, five cents becoming effective in June and five cents becoming effective in December. The wage boost together with increased operating costs and declining patronage left the CTA with a year end deficit of \$856,158 in the depreciation requirements of \$6,500,000 for the year. Nor were funds available for the payment of compensation for use of city streets, or for deposit in the modernization fund. The previous year the CTA paid city compensation of \$1,035,000 and deposited \$116,320 in the modernization fund.

Despite the 1949 deficit, the CTA regards 1950 with optimism. Revenues available during the last quarter of 1949 indicate, the authority reported, that it would overcome the 1949 deficit early in 1950. Afterwards, it added, city compensation is likely to begin accumulating.

Revenues for 1949 totaled \$116,239,238, as compared with \$115,645,824 for 1948. Operating and maintenance expenses were \$105,495,092 as against \$103,033,793 for 1948. The financial progress achieved in the last quarter of 1949 is reflected by the fact that the deficit in depreciation reserve, which stood at \$2,025,361 at September 30, 1949, had been reduced by \$1,169,203 by the end of the year.

GAO -- Watchdog of Exchequer

(Continued from page 28)

gress started to place government corporations under uniform controls. It enacted the George Act, the audit provisions of which were designed to bring all government corporations under annual scrutiny by Congress through the medium of audits and reports by the GAO. That same year the Government Corporations Act, which calls for the submission of annual budgets by government corporations, was enacted.

The law now provides that government corporations have their financial transactions audited in

accordance with the principles and procedures applicable to commercial corporate transactions.

While this strengthening of controls over spending of public money was going on, other efforts were made to narrow GAO's authority and scope.

For example, due chiefly to the war, the function of settling certain types of claims has been conferred upon the operating agencies in which the claims arose. The Contract Settlement Act of 1944 authorizes the contracting agencies of the government to settle claims based on the termination of war contracts and makes such settlements final and conclusive except for fraud. The Tort Claims Act of 1946 nibbled a little more of GAO's power to protect the public purse. It vests the function of settling claims of \$1,000 or less in the department or agency in which the claims arose and makes such settlement beyond any revision by the GAO.

Settlement A Control

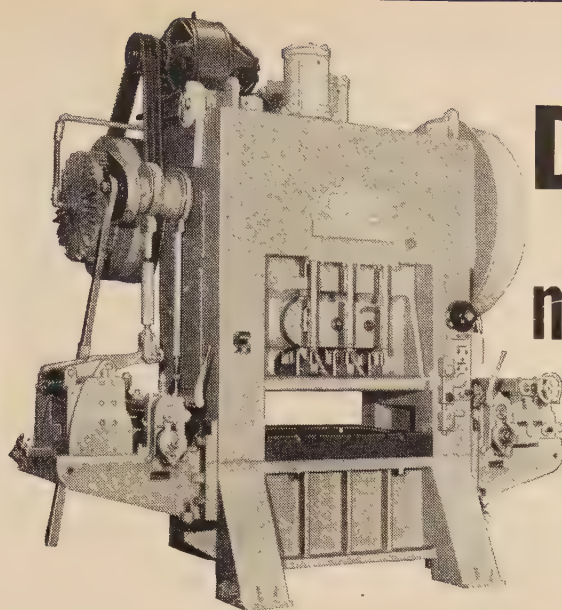
The authority to settle claims is, of course, a means of control. To the extent that this authority is conferred upon the executive branch of the government it serves to weaken the control of the accounting officers and the Congress over the expenditures of public funds.

A government agency can also be prevented from carrying out its functions if Congress does not appropriate money for the purpose. Here's what is being done to the GAO:

Section 206 of the Legislative Reorganization Act of 1946 directs the comptroller general to make an expenditure analysis of each agency in the executive branch of the government. He is to report the results of his findings to the Congress to enable that body to determine whether public funds have been economically and efficiently administered. No appropriations have been made by recent Congresses to carry out the 1946 law.

Cold statistics give some indication of the service rendered the people by the GAO.

During the fiscal year ended June 30, 1949, the GAO, among other duties, examined and ap-



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proved some 61,587 money warrants; audited 22,739,237 vouchers; examined 1,228,648 contracts; settled 563,794 claims; settled 389,017 fiscal officers' accounts; reconciled 459,581,442 checks in more than 68,959 different checking accounts, and rendered 13,038 decisions to the departments and agencies, claimants and others.

The comptroller general wants to receive information as to irregularities in expenditures believed to have taken place, and information indicating wasteful or otherwise improper use of any public funds or property. The "tip" may be by telephone or by letter addressed to the Comptroller General.

Recently the committee on expenditures in the executive departments made a report to the House of Representatives which emphasized the importance of keeping intact the GAO's power as watchdog on the public treasury.

"Any proposed legislation which even tends to weaken the jurisdiction of the General Accounting Office, as conferred upon it by the Congress, or which would tend to interfere with the control of the Congress over the activities of that Office, should be jealously scrutinized," the report warns.

Here, There and Everywhere

(Continued from page 8)

and gross receipts taxes as their greatest single source of revenue in 1949, reports Commerce Clearing House. Gasoline and motor fuel taxes were the top producers in Nebraska, while Delaware with its favorable laws for incorporation got its major revenue from franchise taxes.

• "Chlorine Handbook"—Diamond Alkali Company, Cleveland, O., has prepared a "Chlorine Handbook" to help meet the increasing need for basic data covering the safe storage, handling and use of chlorine. The handbook also covers the physical properties of the volatile chemical.

• Television Troubles — A flood of complaints has been received by the Chicago Better Business Bureau in the last several months from tele-

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vision buyers who feel they are not getting the quality of reception they had been led to expect. A substantial portion of the sets on the market are involved in the complaints, but most complaints involve cases where the retailer sublets service contracts to a separate organization. Representatives of the television field have told the Bureau that there are not enough trained technicians for the huge volume of installation and service work in this booming industry.

• **New "Dome" Train** — Another "dome" streamliner is now operating to and from Chicago. The latest addition is the Wabash Railroad's \$1,500,000 "domecoach" streamliner running daily between St. Louis and Chicago. The six car train was built by the Budd Company.

Trends In Finance and Business

(Continued from page 12)

oversupply of labor will get new automobile parts plants in the next few years, the magazine predicts.

With the steady increase in the use of mechanized equipment in factories, architects find that it is often more economical to erect a specialized plant rather than try to fit the new equipment into an existing plant.

The big postwar program of building new assembly plants is slowing down, according to the magazine, but that is being offset by an increasing number of factories being erected or planned for other purposes. One large architectural firm, for example, expects to be busy for the next decade designing new foundries for automotive firms.

« « » »

Fight to Stop Diversion of Highway Funds The National Highway Users Conference reports that six states are expected to consider legislation designed to prevent the diversion of taxes paid by highway users to non-highway purposes. Three of the legislative proposals — in Mississippi, New Jersey and New York — call for constitutional amendments prohibiting diversion. Twenty-one states already have comparable amendments in effect.

FORTUNE Magazine, in September, said:

"The only remaining shortage, and the most serious, is the shortage of creative salesmanship. The most important educational job ahead of industry, is to cultivate a new spirit of salesmanship."

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New Products

Portable Welder

A portable arc welder, designed for all jobs in the 200 to 300 ampere range, has been introduced by the LeJay Manufacturing Co., Minneapolis 8, Minn. According to the maker, the light-weight welder will be particularly useful on the farm, where it can be mounted on a jeep or tractor to speed up repair work on implements in the field. The welder can be bolted down for engine or motor drive and operates on a Bendix P-2 generator.

"Hide-A-Key"

Ever walk up to your locked car and discover you've mislaid your keys? That minor crisis should no longer occur if you have a gadget devised by Three Point Industries, consisting of a small, magnetized metal box which holds spare keys and can be attached to your car in a variety of "secret" locations—under the fender, bumper or grille guard. Rough riding will not shake the box loose, according to the manufacturer, whose address is 3767 N. Racine Avenue, Chicago 13.

Personal Auto Tag

Another unique item in the auto specialty field which has just reached the market is a "personalized auto license tag" showing the owner's initials in three-inch block letters. Gift Crafters of Blue Springs, Mo., believe the 10,000,000 autos now carrying an empty front license bracket provide the market for their new product.

Portable Addresser

A portable addressing machine that fits into the palm of one hand and retails at less than \$10 has been introduced by the Heyer Corporation, 1850 S. Kostner Ave., Chicago 23. The small master roll handles 250 addresses and the inking fluid is stored in a cartridge wick which is said to stay wet for a full addressing run. Each address is good for 100 or more impressions.

Nylon Inner Tube

A new, high-strength nylon inner tube, said to have a reserve strength almost equal to that of

the tire itself, has been developed by the United States Rubber Company, New York 20, N. Y. In the event of a puncture, the nylon construction squeezes rubber around the puncturing object, preventing sudden flats. In one test, an auto equipped only with the tubes—no tires—was run for miles without loss of air.

Quick-Spray Enamels

Plasti-Kote, Inc., 425 Lakeside Avenue, N.W., Cleveland 13, has introduced a line of household and automobile enamels in 10 colors, packaged in special self-spray cans. Paint and pressure are both contained in the 12-ounce aerosol cans. The sprayed paint is said to dry in 20 minutes.

Anti-fouling Coating

A new anti-fouling coating, in bright red and green, to prevent marine grass growths on boat bottoms has been introduced by the C. A. Woolsey Paint and Color Co., 229 E. 42nd Street, New York. The new product is said to incorporate all essential anti-fouling qualities discovered since the war, plus the innovation of bright color.

Jogger-Sorter

Ditto, Incorporated, 2243 W. Harrison St., Chicago 12, has introduced a new 22-pound machine, the size of a standard typewriter, which is said to speed up paper jogging and sorting five to 25 times. According to the manufacturer, the machine jogs a ream of paper in one-third to one-fifth the usual time and, among other things, sorts sets of forms into originals and duplicates keeping all copies in the original order.

Quality Indicator

A new "quality control indicator," said to assure the highest possible quality of most mass-produced items, has been developed by the General Electric Company, Schenectady 5, N. Y. The electric computer keeps an automatic, continuous check on reject rates in manufacturing operations, and pinpoints abnormally-high rejection rates long before they can be spotted

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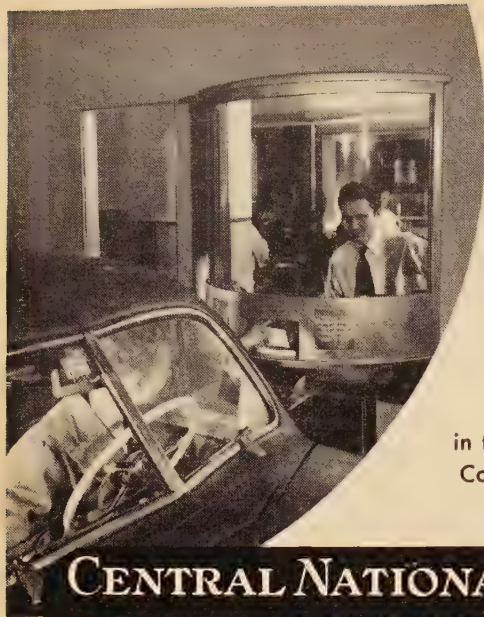
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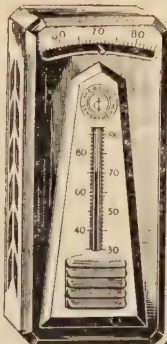
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Midget Typewriter

An almost vest-pocket size typewriter, designed especially for plane and train travelers, has been created by L. C. Smith and Corona Typewriters, Inc., Syracuse 1, N. Y. Occupying less than 1/4 cubic foot of space, the tiny "Skywriter" nevertheless has a full-size standard keyboard, takes a standard letter-head and has a low center of gravity to prevent it from creeping.

Tape Applier

Tapematic Corporation, Newark, N. J., has introduced a new tape applier that automatically dispenses, applies and cuts transparent pressure-sensitive tape in one quick operation. The plastic applier is pressed down and the tape comes off a roller without fingers touching or sticking to it. A finger-controlled lever cuts the tape at the desired length.

Versatile Freezing Tray

A refrigerator accessory, called the "Freezerette" and consisting of six unbreakable plastic jars of assorted colors in an aluminum tray, has been introduced by Gits Molding Corporation, 4600 W. Huron Street, Chicago 44. The plastic containers can be used for individual servings of ice cream and other frozen deserts, or to provide a reserve supply of outsize ice cubes.

Communications Recorder

A multi-channel magnetic airport recorder, capable of recording 14 channels simultaneously, has been developed by the Brush Development Company, Cleveland, Ohio. The unit is expected to contribute to air safety by making available an exact record of all reports and communications between pilots and airport control tower operators.

Instantly Reversible Motor

A single-phase motor that reverses instantly at the flip of a switch and starts in either direction has been developed by the Iron

Fireman Manufacturing Co., Portland 2, Oregon. The motor, which utilizes a new "Reverswitch," is said to be particularly adaptable for use in lathes, conveyors, hoists, garage doors and the like where instant reversibility is essential.

Tooth Paste Saver

A simple gadget, yet one of obvious merit to the father who groans at the sight of crumpled tooth paste tubes, is the "Tube Roll-Up," a small plastic device that fits on the end of any tube and neatly rolls it until the contents are exhausted. The manufacturer: Tube Roll-Up Company, 510 Manhattan Bldg., Toledo 4, Ohio.

Labor-Saving Machine

The Weber Tool Engineering and Manufacturing Co., 1056 N. Wood Street, Chicago, has introduced a new loose leaf machine that is said to progressively score, emboss, form, perforate, print and cut off any length of paper at the rate of 800 sheets a minute. The unit also stacks the sheets in any number desired.

Low-Cost Dictation

Pentron Corporation, 613 W. Division Street, Chicago 10, has introduced a new sound-on-wire dictating device, called the "Sonograph," which is said to reduce dictation costs to a half a cent an hour. The company says this compares to dictation costs of six to 12 cents an hour with disc dictation and 40 cents an hour for wax cylinder dictation.

Time-Saving Ground Detector

Factory electricians have long faced a hazardous problem in locating grounds in wiring systems. Usually, the job requires that machinery be stopped and warnings be given; and sometimes it has resulted in extensive damage caused, for example, by loads falling from magnetic cranes or work jamming in machinery. Now, however, a new ground detecting instrument has been devised by the Ferr Manufacturing Company of Chicago, which eliminates these serious hazards. The unit, called the "Allen Ground Detector," is distributed by Excel Electric Service Company, 2102 S. Western Avenue, Chicago 8.



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Answer To "Loaded" Question

(Continued from page 30)

Congress has added laws regulating business competition, and thus there is a "discrepancy between responsibility and resources." It would be a strange government bureau indeed which was unwilling to admit it would like bigger appropriations.

But the commission devotes most of its 74 pages to a listing of suggestions for strengthening its authority to deal with monopolistic practices. The suggestions are highly revelatory of the commission's line of thinking and hence of considerable significance to business. A covering letter from Acting Chairman Lowell B. Mason made the delicate point that the answers were not to be construed as "recommendations," but as "suggestions." He said: "If we are in error in following this course, we shall be happy to revise our answers and confine them to 'recommendations'."

Since the House committee did not ask for a revision, and since in effect they set the tone for the investigation, the "suggestions" are worth examining.

Three Sources Of Monopoly

Monopoly, says the FTC, grows in three ways: through conspiracies in restraint of trade; through unfair practices that impair competition; and "through enlargement of the size and power of individual enterprises or corporate combines to a point which is inconsistent with competition."

With respect to the conspiratorial and the unfair practice aspects of monopoly, the FTC finds its present powers "adequate." But in the third area it says:

"As to structural aspects of monopoly, the commission's authority is too limited to make possible an effective attack on monopolistic concentration of economic power. The FTC act is applicable only to acts, practices, and methods of competition, not to the size, structure, or power of a business enterprise.

"The commission has no authority under this act to dissolve a large corporation, to divest it of

Three groups of changes in existing laws are needed, the FTC suggests.

1. Amendment of the Clayton and FTC Acts to give FTC jurisdiction over restraints of trade if they "affect" interstate commerce as well as take place "in" interstate commerce. "The narrowness of application . . . given to the substantive provisions of these two



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statutes stands in sharp contrast to the breadth of application that characterizes the Sherman Act."

2. Permitting the FTC, subject to judicial review, to "enjoin lawful acts insofar as they must be stopped to dissipate the effect of unlawful practices."

3. Strengthening FTC power to enforce compliance with its orders. "The commission could be given authority like that now enjoyed by the National Labor Relations Board, to appeal to a court for enforcement of its order as soon as the order is issued and without reference to the question whether the respondent is complying or has indicated an intention to comply. This would enable the commission to test the validity of an order instead of being dependent upon the respondent for determination whether there shall be such a test."

4. Granting the FTC blanket power to correct unfair business practices in a group of business enterprises when each of the units is individually engaged in some violation of the law. This would obviate the present need for instituting separate proceedings against each unit, and subjecting each one to a separate cease and desist order.

"One possible way," the FTC writes, "would be to provide by law that when an order with reference to a practice in a particular industry has been sustained by a court and has become final, the commission may, after notice and opportunity for all interested parties to be heard, promulgate a rule covering the industry or any part thereof and expressing the applications of law established by the prior court decision, subject, however, to judicial review. . . . Any concern which, after due notice of such rule, violates the law in the particulars covered by the rule would be presumed to be guilty of a wilful violation, punishable as a misdemeanor, rather than merely subject to a cease and desist order.

"If such a procedure were used, members of an industry would be put on notice of developments in substantive law as they occurred and would have the option of compliance or penalty. . . . Once the commission had issued an order in the usual way against a single violator and had been sustained



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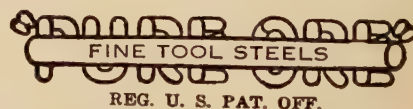
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in the courts, incorporation of the order in a rule after public hearing . . . and dissemination of notice about the rule would carry the process of obtaining compliance as far as it can now be carried by a long series of separate proceedings."

In its third grouping, the FTC outlines a need for coping with the structural aspects of concentrations of economic power. It notes that it cannot now:

1. Prevent domination of an industry "by one or more large companies that have not obtained monopoly stature sufficient to be dissolved under the Sherman Act."

2. Regulate power based on peculiarities of industrial structure such as unusually great diversification or disproportionate vertical integration.

3. Prevent growth to "excessive" size by reinvestment of earnings or flotation of securities.

4. Deal with concentration of financial control over industrial corporations.

The commission comments:

"Problems of the 'Big Three' or the 'Big Four' rather than of monopoly in the Sherman Act sense are outstanding in modern industry." It suggests a "suitable amendment to the Clayton Act which would provide that where a corporation has attained a size and power that substantially lessens competition, or where a small group of corporations have collectively attained such size and power, such corporation or corporations shall be dissolved into corporations of a number and size sufficient to remove this effect.

"The purpose of such an amendment would be two-fold: first, to provide a standard for action that would reach large quasi-monopolistic enterprises (sometimes described as oligopolies) which the courts have found cannot be reached under the Sherman Act; and second, to give the FTC jurisdiction alongside the Department of Justice in dissolution proceedings."

Examined one by one, the scope of the FTC's suggestions has a cumulative effect that is startling. The agency hints it has other ideas but does not want to trespass on other jurisdictions: "The problems are difficult, and their solution may lie in part in amendments to the tax laws, federal incorporation

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of interstate business, or other types of legislation," it notes in passing.

One of the most significant phrases is that proposing that the FTC have "jurisdiction alongside the Department of Justice." Whether motivated by bureaucratic rivalry or genuine anti-monopolistic zeal, the FTC wants power that will match that of Justice and in some respects surpass it.

This is borne out by a bit of self-touting argument which the agency introduces in connection with its proposal for power to dissolve monopoly at a "sub-Sherman Act level. It says:

"The desirability of giving the FTC jurisdiction in this field is evident in the peculiar design of the commission. It is bi-partisan; changes membership gradually without regard to changes in the executive branch of the government; is equipped by law with broad investigatory powers that can be used not only to prove a violation of law but also to ascertain the appropriate form for a corporate reorganization; and is staffed by both lawyers and economists.

"These virtues of continuity, absence of partisanship, authority to investigate, and economic as well as legal expertness are peculiarly valuable in a dissolution proceeding, for this type of proceeding is likely to be unusually complex and long drawn out. . . .

"A frequent criticism of dissolution decrees under the Sherman Act has been that they were ineffective because they were hastily devised on the basis of the facts obtained to prove a violation of law, and without an adequate underlying basis of economic judgment derived from specific research into matters that are appropriate to the shape of the decree even though not appropriate to the proof of violations of law."

In short, if you want monopoly busted, hire the FTC.

Is Congress likely to set the FTC up in business on any such scale? Probably not. It is too early to tick off which of the suggestions have a chance of going through. But the FTC letter has opened up a wide field which will be explored not only by Patman's Small Business committee, but by the

House Judiciary committee in connection with Chairman Emanuel Celler's monopoly investigation.

If it does nothing else, the FTC letter promises to deflect what started out as an investigation of its stewardship, and to turn it into a hunt for new legislative weapons against monopoly. It's not often a government bureau manages to turn such a trick as neatly as this.

Two-Way Street

(Continued from page 27)

about the business will be given freely, frankly and promptly. And they should know also that management is interested in their ideas, thoughts and even their complaints so that decisions made will give proper weight to human relations factors.

As to the actual communications plan itself, I suspect that ours differs very little from many of yours, so I will run very lightly over these details. Here are some of the things involved:

1. Placing line responsibility for communications with every supervisor with respect to his unit. This means that the president is responsible at the top, with a similar obligation flowing downward through the entire organization chart.

2. Assigning definite staff responsibility for constantly watching the effectiveness of the plan. This duty is lodged jointly with the Personnel Division and the Public Relations Department, which in our organization work very closely together.

3. Keeping executives informed so that they will have the necessary information to pass along to their subordinates.

4. Giving a sympathetic ear and an open mind to information coming up the line, so that such a flow will be encouraged.

5. Continuous training of management people in the importance of good communications as a basic fundamental in sound personnel relations.

Naturally, the plan also involves the setting up of special communications media, supplementary to the main channel, such as bulletin board notices, a company newspaper, and various other publications, including a booklet which outlines the duties and privileges of all



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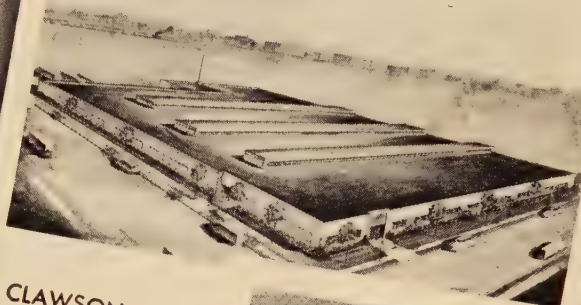
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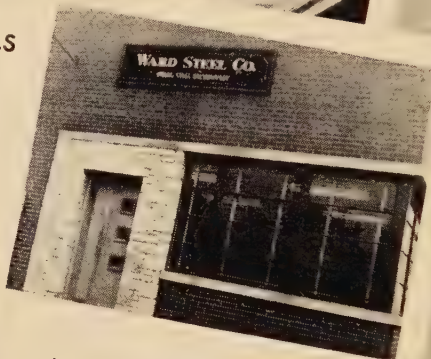
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employees; a loose-leaf Foreman's Handbook, which is even more complete in matters of policy and procedure and is constantly kept up to date; special manuals on insurance and retirement plans and, of course, the annual report which goes to all employees as well as to stockholders.

On top of this, I write a News letter once a month, or oftener if there is occasion, which goes to all management, sales and technical personnel, including foremen. This letter deals very frankly with virtually all phases of our business.

In addition, there are such media as a fast-operating complaint procedure, special induction programs for all new employees, exit interviews of those who leave and, from least, a suggestion system operating under a full-time director.

Officers Meet Weekly

The fountainhead of our line communications system is the regular weekly meeting of all officers of the corporation. This begins with luncheon each Monday and usually lasts for three to four hours. As a follow-up, there are regular divisional and departmental meetings so that information can be passed down the line — promptly and "right from the horse's mouth".

A special effort is made to keep the entire organization advised of developments before they are released to the press. And it is standard practice to inform supervisory personnel in advance on all important matters that are relayed in writing to employees as a whole. Speaking of putting things in writing for employees, I'd like to make this point with all the emphasis at my command. Don't do any more writing than you have to! A hundred words spoken by the right person at the right time in the right manner are worth a thousand written words, no matter how skillful the writer is.

As most of you know, Carrier is far from being a huge corporation. But I believe I am safe in saying that our personnel division, operating under a vice president of long experience in this field and reporting directly to me, is considerably stronger organization-wise than is the case with many larger companies.

A great deal of emphasis is placed

(Continued on page 149)



INDUSTRIAL DEVELOPMENTS

IN THE CHICAGO AREA

INVESTMENTS in industrial facilities in the Chicago area during February, 1950, totalled \$31,053,000, which brings the total for the first two months of 1950 to \$53,248,000. The investments during each of the first two months were larger than in any month in 1949. Comparable figures for 1949 were: February, \$10,125,000; for the first two months, \$16,557,000. These investments included expenditures for newly constructed plants, construction of expansions to existing plants, and acquisitions of land or buildings for industrial purposes.

Hotpoint, Inc., Chicago manufacturer of electrical home appliances and commercial cooking equipment, will erect a new refrigerator plant on a 21-acre site facing 1,000 feet on 54th avenue at 16th street. It is the final step in a comprehensive plant building and development program that began early in 1947 representing an investment in plant and equipment of 35 to 40 million dollars. When the new plant is completed Hotpoint will have all of its manufacturing facilities except one plant in the Chicago area. The investment in the refrigerator plant is expected to approximate the \$12,000,000 expenditure made on the million square foot range plant, which was completed in 1948. The refrigerator plant will add one-third to the total plant floor space of the company, bringing it to about 4,000,000 square feet. Hotpoint is also going ahead with the tooling and machine installation to complete the conversion of its old range plant for the production of home laundry units. This will be completed this year. The automatic washing machine was placed on the market a year ago but the

complete equipping of the Chicago plant was delayed.

Carnegie-Illinois Steel Company, Division of United States Steel Corporation, will increase its Chicago district production of cold reduced sheets by about 200,000 tons a year. This increased production will be obtained at the Gary Sheet Mill and Gary Steel Works, where temper mills and pickling lines will be modernized and an additional shear line will be installed. A slabbing mill, soaking pits, ingot strippers and auxiliary equipment will also be built.

Peter Paul, Inc., candy manufacturer with headquarters in Naugatuck, Conn., has purchased a 14½ acre site in La Grange Park on which it will construct a plant as soon as equipment now on order is available. The building will contain over 200,000 square feet.

Powers Regulator Company, 2720 N. Greenview street, has purchased a 13-acre site in Skokie. A modern one-story plant containing 150,000 square feet will be constructed on the property and all Chicago operations of the company will be transferred to the new plant upon its completion. The company manufactures temperature controlling apparatus, heating specialties, and shower mixers.

H. C. Christians Company, 1515 S. Blue Island avenue, will construct a two-story and basement building at 1325 W. 15th street to be used for the processing of butter and the candling of eggs. The building will contain more than 100,000 square feet. Battey and Childs, engineers.

Bethlehem Steel Corporation is constructing a 19,000 square foot addition to its reinforcing bar plant at 65th and Austin avenue in the Clearing Industrial District.

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Stockham Valves and Fittings, 3612 S. Iron street, is constructing an addition to its plant. A. Epstein and Sons, Inc., architect-engineer.

B. T. Babbitt Company, which operates a plant at 6233 W. 65th street, will build another unit at 66th and Nashville avenue. The new plant will contain 30,000 square feet. Arthur Rubloff and Company, broker.

Nicolay-Dancey, Inc., Detroit producer of potato chips, has purchased 124,000 square feet of ground at Archer and 51st street on which a 15,000 square foot building will be constructed, with expected expansion later. A. Epstein and Sons, engineers.

Burrell Belting Company, 413 S. Hermitage avenue, manufacturer of industrial belting for power transmission, conveyors, etc., including woven endless belts and brake linings, is constructing a new 25,000 square foot plant in Skokie. The building will be one story of brick, concrete and steel construction.

Champion Textile Finishing Company has purchased a one-story industrial building at 4939 S. Austin avenue in the Clearing Industrial District.

American Rivet Company, 1301 W. Congress street, has purchased the industrial property at 847-60 N. Kedzie avenue. Wm. M. Hart and Company, broker.

Columbia Envelope Company, 1835 Hawthorne avenue, Melrose Park, is constructing a 25,000 square foot addition to its plant.

Mid-West Color Card Company, Inc., 622 S. Clinton street, has purchased a one-story and basement building at 1729 N. Winchester avenue. The company will move its entire operations to this building.

Standard Galvanizing Company, 2619 W. VanBuren street, is constructing an 18,000 square foot building on a 70,000 square foot site at 3308 S. Cicero avenue.

Raypar, Inc., 3709 W. Armitage avenue, manufacturer of electronic devices, has purchased the building at 7810 W. Addison street.

Arthur Harris and Company, 212 N. Aberdeen street, manufacturer of milk condensing equipment, is constructing an addition to its plant.

Better Meat

(Continued from page 26)

Armour's research chief, puts it.

Most significant of the many products Armour is working on is the new "miracle drug," ACTH (adrenocorticotrophic hormone), made from hog pituitary glands. Clinical tests indicate that ACTH will help cure rheumatoid arthritis and it has also shown bright promise in treating rheumatic fever, leukemia and other serious diseases that have been considered more or less hopeless before.

Two mountainous hurdles must be jumped before ACTH can be made generally available. Supply must be many times greater and the cost must be hauled down. Armour figures it would require 5,000 to 10,000 times more ACTH to treat the country's rheumatoid arthritis sufferers than could be made from the pituitaries of all hogs slaughtered in the United States. Thus, Armour is attempting to synthesize ACTH in order to make it from cheap plentiful materials. It also is searching for a way to make it in a more potent form so a little will go much further.

Animal Blood Transfusions?

The idea of substituting animal blood for human blood is also being investigated at Armour. Researcher Conquest believes the use of albumin made from beef blood for transfusions is by no means out of the question. Research clinics have tested it in transfusions and found that it produces hives in some people. Others turn purple in spots. But these and other bad reactions can probably be prevented.

Armour is also attempting to find high value products that can be made from animal fats. The company has already learned how to convert tallow and other cheap fats into such products as germicides (one is 400 times more potent than carbolic acid, yet non-poisonous to humans in small amounts); a waterproofing material; an agent to separate potash and phosphate from silica and another that keeps lubricants from breaking down under extreme heat.

The company makes a number of pharmaceuticals of animal origin for which it has not yet discovered

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a use. The policy is to sell them to research agencies in the hope they, in turn, can uncover practical applications. For example, Armour markets a chemical known as "ribonuclease" (produced from the pancreas of cattle) for \$175 per gram, also certain fractions of animal blood for as little as 10 cents a gram.

Packers may never quite discover how to make a meat slide rule but researchers at the American Meat Institute Foundation are working on this arresting idea. First, however, they are trying to find pre-

cisely what factors make for quality in beef.

What properties are responsible for tenderness? What makes a steak taste good? What chemical and physical changes take place when beef is aged? Are these changes related to tenderness and good flavor? Can the basic factors affecting the quality of beef be measured? Can they be controlled, either during the raising of the beef animal or in handling the meat after slaughter?

No one knows the exact answer to these questions yet, but founda-

tion researchers hope to uncover some of them. One thing they do know: the amount of juice greatly affects taste. So they squeeze out the juice out of selected samples and measure and compare the quantity extracted.

A scientific biting machine is used to check tenderness — measures the amount of pressure needed to cut beef samples in two. Very thin sections are studied under a microscope to determine what physical differences exist between grades and a delicate instrument measures the amount and distribution of the different types of tissue that make up a piece of meat.

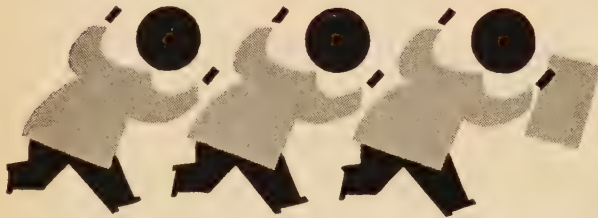
All information assembled in these tests is correlated and compared with the findings of a panel of tasters, for in the end actual tasting is the best guide of all. Cooking of the test samples is precisely controlled. The taste experts try samples of fresh beef. They chew more samples after aging for 14 days and get a final taste when the beef has reached a tender 28 days of age.

Quality And Production Aid

Results of this research should not only help packers come closer to knowing the exact quality of a piece of beef before it's eaten but should also assist farmers in turning out better steers by throwing light on factors responsible for the best meat.

All told, the Foundation's 35 researchers (it had 10 in 1939) are working on 25 projects, ranging from the development of information that will lead to product and processing improvements to the discovery of new or improved uses for animal products. They are seeking ways to improve the nutritive value of the \$35,000,000 worth of meat scraps packers sell every year for livestock feed; also methods of preventing product and processing failures; new uses for animal fats; and information on known and unknown nutritional elements in meat and byproducts.

Meat researchers working in other laboratories are prying into many other fields. One group is looking for ways to make ice cream creamier with less cream by perfecting better gelatin, a product made from pig skins. Another has been trying to make a plastic out-



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of hooves, horns and animal hair. Bacon that won't develop a rancid taste when kept at room temperature is being considered by other researchers.

Just how successful all this research will be is a question that will not be answered right away. That the possibilities are fertile is indicated by the many products that have already been found as a result of research on materials derived from livestock. Examples: insulin for treating diabetes (made from cattle pancreas) and liver extract for pernicious anemia. More recently, it's been found that ox bile can be converted into cortisone, a material that has possibilities as a treatment for arthritis. Other byproducts the industry makes from livestock cover everything from glue to catgut for tennis rackets and violins (made from sheep's intestines) and from glycerine to gall stones, which are sold to orientals for talismans.

True, the packers have not yet utilized the pig's squeal—but every other morsel of his being is becoming more valuable than ever, thanks to exhaustive research.

Rockets

(Continued from page 21)

cations of jet propulsion. The other is duct propulsion. A true rocket carries its own propellant: fuel and oxidizer. It is completely independent of its environment and can, according to Dr. G. P. Sutton of North American Aviation, Inc., operate in air at any altitude, in water, in any other gaseous or fluid medium, or in a vacuum. In operation, a chemical reaction takes place within the unit that generates high temperature, high pressure gases. These, in turn, are ejected through a nozzle.

Duct Propulsion

A duct propulsion system, on the other hand, carries only its own fuel. The surrounding medium, either air or water in most cases, is ducted through the mechanism and accelerated by mechanical or thermal means prior to ejection. The *Aeropulse* or V-1 buzz bomb is a typical example of a duct propulsion unit.

There is no U. S. guided missile

yet ready for the assembly line on a mass production basis, but the plan leading to its creation is well under way. The procedure has been going somewhat like this: First, the military decides what features are needed either for an offensive or defensive task, then design problems are turned over to scientists and engineers. Their blueprints are turned over to Douglas, Lockheed, General Electric and other large companies for conversion into operating models.

Afterwards, every component is

painstakingly tested. Power plants are mounted on blocks and test run; airfoils are tested in tornado-like wind tunnels; metals are subjected to extreme cold and the blazing temperatures produced by tremendous speed and air friction; paint patterns are studied for photographic purposes.

Today there are five missile test ranges in the United States. The Air Force commands two of them, one at Banana River, Florida, the other Alamogordo, N. M. The Army operates White Sands, N. M.,

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the Navy controls Pt. Mugu and Inyokern, California.

The installation at Banana River was formerly known as the "joint long range proving grounds for guided missiles." It will go into operation the middle of next year. From Banana River the range will extend in a southeasterly direction out over the Caribbean Sea for a distance of 500 miles. Radar and observation towers will be scattered along the string of islands that constitute the Bahamas and, together with rocket-installed telemeter instruments that determine distance, will be the means whereby rocket flights can be checked. The installation is budgeted at \$75,000,000 and will eventually accommodate testing facilities for the 3,000 and 5,000-mile super-rockets that scientists have in mind.

Guidance Problem

Guidance remains the biggest problem to be solved before manless missiles can be used extensively in either peace or war. Radio waves will not do the job efficiently—as in the case of airplanes, but electronic devices, including ones that will search out the heat, light or sound of a city are being developed. This is the most secret phase of the U. S. rocket programs.

All of this work falls under the secretary of defense and the guided missile committee of the joint research and development board, headed by Dr. Robert Milikan, president of California Institute of Technology, and composed of two representatives from each of the services and three civilians.

California Institute of Technology with its Jet Propulsion Laboratory holds an important place in U. S. rocketry. There the *Wac Corporal*, a meteorological sounding rocket, was developed. Only 12 inches in diameter and 16 feet long, this missile, when installed in the nose of a V-2, has climbed 250 miles and reached a speed of 5,000 M.P.H. This test was made a year ago by the Army Ordnance Department and the General Electric Company. It was January 1950, however, before a part of the missile's tail section was finally located near the north end of the 116-mile firing range at White Sands, N. M. It had been thought that the heat and shock

produced by the rocket's re-entry into the earth's atmosphere would cause it to disintegrate into tiny pieces.

Rocketry has by no means found its only application in missiles, guided or otherwise. It has gained considerable practical importance in both civilian and military airplane design. Used as the sole source of power, the Bell XS-1 supersonic rocket plane carries a quadruple rocket motor capable of developing a 6,000 pound thrust. As auxiliary power supplies, rocket installations are also becoming more and more useful in take-offs as well as in regular flight. By means of jet-assisted take-offs, "JATO", commercial aviation has a means whereby heavier payloads can be lifted into the air even from short runways.

The fuel question in either a primary or auxiliary rocket system is still not completely solved. Progress, however, is being made. At the Lewis Flight Propulsion Laboratory of the National Advisory Committee for Aeronautics in Cleveland, Ohio, fuels are being studied that are 2.5 times as powerful as the ordinary gasoline-nitric acid propellant. One of them is a hydrogen-oxygen mixture; another a hydrogen-fluorine combination.

Unpredictable Future

Where the future of rocketry and guided missiles will take us, no one is quite sure. They're still too new and unpredictable as exact sciences for even reasonable guesses. The emphasis at present is on military applications. This is understandable simply by virtue of the great amount of money necessary to initiate and carry out rocket research. Men have compounded important chemical formulae in basement laboratories at home, but no one can rig a supersonic wind tunnel on his own capital.

Rocketry's place is not unlike that of atomic energy. The public knows very little about either. Scientists know a few basic principles about each one, but by their own admission they have just scratched the surface. In both cases, the potentialities stagger the most vivid of imaginations; applied to peace time projects, a new era of power and speed may be considered as in the making.

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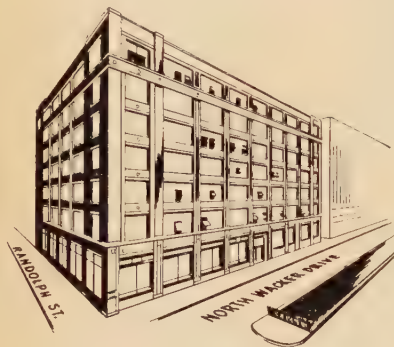
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THE Interstate Commerce Commission, on February 8, issued Service Orders Nos. 846 and 847 directing railroads to reduce their coal burning locomotive mileage. Service Order No. 846 required a 50 per cent reduction in passenger locomotive mileage under the mileage operated on December 1, 1949. Under a previous order, effective January 8, 1950, the commission had required railroads to reduce coal burning passenger locomotive mileage 33⅓ per cent. The new order became effective 11:59 P.M., February 10. By Service Order No. 847, the commission directed railroads to reduce their coal burning freight locomotive mileage 25 per cent under such mileage operated by them on February 8, 1950. This was the first curtailment of freight service resulting from shortage of coal. The commission referred to the "dangerously low level" of the reserve stocks of railroad fuel coal, and that immediate action was necessary to meet the emergency existing in all sections of the country.

Railroad to Take Rail-Barge Order to Supreme Court: The United States District Court for the Northern District of Illinois has upheld the order of the Interstate Commerce Commission in I. C. C. Docket No. 26712 involving rail and barge joint rates. The order of the commission had required the railroads and water carriers operating on the Mississippi and Warrior Rivers to establish through joint rail and barge routes and rates according to a formula set forth in the order. Railroads have announced their intention of appealing the decision to the Supreme Court of the United States. The original order of the commission required rates to become effective November 1, 1949;

however, because of the pending court proceeding, the effective date of the order was postponed to March 31, 1950.

I. C. C. Freight Forwarder Order Set Aside: The Supreme Court of the United States has affirmed the decision of a three-judge District Court holding that the Pacific Coast Wholesalers Association, a freight forwarder cooperative, is not subject to regulation by the Interstate Commerce Commission as a freight forwarder operating for profit. In 1945, the Interstate Commerce Commission considered the status of the Pacific Coast Wholesalers Association and concluded that the association handled traffic only for its members, had been operated in good faith for the purpose of effectuating savings in freight charges for its members and was operated on a non-profit basis. The commission concluded that the Pacific Coast Wholesalers Association was not a freight forwarder subject to regulation under Part IV of the Interstate Commerce Act. In 1947, the commission reversed its position, after having found that certain shipments were made f.o.b. destination and that on such shipments the non-member consignor who made the shipment was required to pay the full less-than-carload rate rather than the charges actually assessed by the association. It, therefore, contended that on this type of shipment the association actually made a profit and was subject to Part IV of the act. The latter decision of the commission was set aside by a three-judge court and has now been sustained by the Supreme Court of the United States. The three-judge court in setting aside the commission's order stated "there is nothing in the act (Interstate Commerce) or the legislative his-

ory to suggest that Congress intended the exemption to turn on the type of shipment which was involved, whether f.o.b. origin or f.o.b. destination. On the contrary, it is clear that the nature of the relationship between the members and the group was thought to be determinative."

Stopping in Transit Order to Become Effective March 15: The Interstate Commerce Commission has postponed to March 15, 1950 the effective date of its order requiring motor carriers in Central Territory to establish a tariff rule permitting the stopping of shipments in transit to complete loading or to partially unload. The order of the commission followed investigation and hearings running over a period of approximately six years. The commission found that there was a commercial necessity for at least two stops in transit between point of origin and final destination to complete loading or to partially unload truckload shipments. The commission also found that there was a necessity for service by motor carriers to permit

one additional pick-up at point of origin and one additional delivery at point of final destination. The order was originally scheduled to become effective January 15, 1950, but upon request of motor carriers was postponed to March 15. Supplements to tariffs have now been issued to become effective on that date.

Railroads Required to Reissue Tariffs: The Interstate Commerce Commission in an order granting special permission to depart from the requirements of the commission's tariff regulations has ordered the carriers to comply with the tariff circular by September 30, 1952, except as to tariffs of class rates and of classification exception. The carriers whose tariffs are supplemented by so-called "blanket supplements" resulting from general increases in Ex Parte 162 and 166, are required to reissue each month, beginning April 1, 1950, not less than 3-1/3 per cent of the total number of pages contained in all tariffs supplemented under such blanket supplements. On this basis the tariffs will be re-



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December, 1948. During the
year 1949 there were forwarded
from Chicago 280,179 cars of which
70.1 per cent arrived on time.
During 1948 there were a total of
335,257 cars forwarded from Chi-
cago of which only 59.3 per cent
arrived on time.

Hearings in Eastern L.C.L. Cases
Postponed: The Interstate Com-
merce Commission upon request
of carriers and shippers has pos-
tponed the hearings in I.C.C. 29777
from February 21 to April 25,
1950. The proceedings involve
revision of rates applicable to
less-than-carload traffic within Of-
ficial Classification Territory. The
postponement of the proceedings
was requested in order to give the
interested shippers an opportunity
to consider several substitute pro-
posals submitted by the carriers. In
the event the substitute proposals
prove satisfactory to the shippers,
the proceedings in Docket 29777
may be cancelled.

Knudson and Mitchell Nominated
for I.C.C.: President Truman,
man, on February 14, sent to the
Senate the nomination of Com-
missioner Richard F. Mitchell for
reappointment as a member of the
Interstate Commerce Commission
and nominated James K. Knudson
to fill the unexpired term of the
late Commissioner Miller. Commis-
sioner Mitchell's term would run
until December 31, 1956, and Mr.
Knudson's term until December 31,
1953. Commissioner Mitchell has
served for three years, filling out
the unexpired term of the late
Commissioner Porter of Iowa. Mr.
Knudson is principal attorney in
the Office of the Solicitor, United
States Department of Agriculture,
in charge of transportation litigation.
He comes from Utah, but
has been in Washington since
1930.

Pitfalls That Kill The Small Company

(Continued from page 18)

A successful company usually has a planned selling program, covering everything from salesmen's commissions to advertising. All steps must be considered—not as an overhead expense, but as cost of getting business. The distinction is important.

I recall a conference of three partners in which they were considering their advertising program. The company had budgeted \$3,000 for advertising for the next two months, when two of the partners suddenly decided that if advertising were cut out for those months, the company would be \$3,000 ahead.

The third partner objected. "While we can make \$3,000 for two months," he remarked, "we will lose more every month for the next 12 months if we don't build our trade volume now." From an operating point of view the ultimate net profit was more important than one item of current cost and the third partner's contention prevailed.

Expense Vs. Cost

There is a tendency among smaller merchants (but certainly not among larger, more aggressive retailers) to think of advertising as an expense, when it is actually a cost. The time to feel badly about poor business is when nothing has been done about it. Where you find a forward looking executive, you invariably find a planned promotional program.

In a calculated selling program, expenditures must be counted in terms of sales accomplishment, not as a per cent of present sales volume. The latter error is common, particularly among firms which started during the war and have only recently faced the problem of competitive selling.

Many small businesses have obtained a foothold in areas where virtual monopolies existed through energetic advertising and selling programs. Occasionally the advantages of the large national business over the small local business with respect to advertising budgets is condemned. Yet, we have found that with local advertising the small concern can tell the local market of his goods or services. To the

extent that it helps him secure a foothold, advertising is a most important friend of small business and especially of the newcomer.

Smaller businessmen often need a fresh approach to their merchan-

dising problem. Sometimes it is not what they have in their stocks but rather what they should have. A proprietor should take a look at the products he is selling, at what the customers want and what they are buying elsewhere. The latter is probably more important than what his customers are buying from

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him. Often, an inexpensive job personal market research can do a great deal of good. It certainly doesn't cost much to get out and see what people are buying in other stores.

What about production efficiency? Taken as a class, the smallest firms do not produce as cheaply as medium-sized businesses. To offset that disadvantage, the successful small business reduces overhead, gives outstanding service, or accepts a lower net profit.

Save On Administration

In distribution, the neighborhood shop may admittedly be unable to buy as cheaply as its bigger competitors, but it can catch up on final cost by eliminating certain intervening administrative controls that are essential in the larger organization. The small retailer or manufacturer often is in a position to take on wanted items for special customers in quantities profitable enough for him to carry or produce, yet too small for the large store or manufacturer to handle. Greater flexibility and informality in operation, when intelligently exploited by small enterprises, will often add up to a satisfactory relationship between cost and selling price.

How about the failure to control operating costs? Excessive overhead expenses actually cause 12 per cent of all business failures. Sometimes it is a matter of excessive personal withdrawal. Consider the case of a dry cleaning plant that had five people plus the manager. The manager was drawing out 20 per cent of total income in salary. A bank representative, called in by a creditor, quickly diagnosed the trouble: "You can do one of two things," he told the manager, "either cut your withdrawals to eight per cent, giving yourself \$40 instead of \$100 a week, or increase your business so you can draw eight per cent and still make \$100 a week. Otherwise, you are headed for bankruptcy."

A dress shop owner in Milwaukee made \$8,000 a year on her business, but owed \$10,000 more than she owned in her business. When a study of her business was made, it was discovered that by drawing on her trade credit she was actually spending \$2,000 more

year than she thought she was making. She was bankrupt and didn't know it!

The truth is that most bankrupts have no records.

Management decisions can be made with confidence if records are used to provide essential facts. An owner of a roofing business found sales harder to get and wanted a sales compensation plan. To get the answer, he needed to know present sales by individual salesmen and products, the usefulness of advertising aids for these men, and the exact nature of the territories. He couldn't get this information from his records and had to guess at the best arrangement. A suggestion of only a slight change in his records at no added cost gave him figures on which to base a correct decision.

A small candy manufacturer, debating the installation of a packaging machine, had to guess at its advisability because his records didn't tell him enough about his costs or possible savings at changing production levels. Proper records would have removed most of the risk in this decision.

Credit Laxity

Credit is another important factor in business failures. Here trouble can come from two sources: poor management of one's own use of credit and over-expanded credit to customers. Some firms make good credit investigations, then ignore them and use plain guesswork. Investigations must not only be made, they must be relied upon.

Experience indicates that small businessmen should base their credit policy on their appraisal of the employment outlook. The amount of income customers are likely to have may be changed by the level of prices, but usually they will have no income at all if they become unemployed. The length of credit terms in successful businesses is limited to the time in which employment situations can be predicted. If the outlook is for two years of good employment, there is less objection to 24-month or 30-month terms, than if the employment outlook is uncertain.

A sound collection policy involves persistent follow-up. Most large retail businesses spend more for collections percentagewise, than

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do small stores, probably as a result of better collection followup.

The final factor in success control — the simple process of delegating authority and responsibility, defining and assigning jobs and setting up proper routines for a smooth flow of work through office and plant or store. It is only when the individual manager leaves himself some free time to observe, think and plan that he can effectively make and carry out the decisions which lead to sound profitable operation.

His job, in turn, is to keep tabs on such external factors as conditions within his own industry, the level of general business activity, and also such internal factors as sales, costs, financial administration, credit and collection policies.

Finally small business must continually re-examine and re-appraise the conduct of its affairs, if it is to succeed.

Preventing Strikes

(Continued from page 16)

For example, all parties must agree the job calls for ability to read and write, a knowledge of simple arithmetic and ability to read simple blueprints. These requirements call for "education to the sixth grade level," which automatically gives a grade C for that factor.

In discussions with operators and supervisors, the committee finds the average training period is six days and the job is automatically given a rating of B for that factor. The same procedure is followed in grading the factors of skill, versatility, job knowledge, responsibility, physical demand, and surrounding conditions (physical hazards, etc.).

When the grades on this particular job have all been agreed upon and added up the committee gets a total of 215 points with a rating factor of 1.049, which means it should pay about five per cent above common labor. If common labor is getting \$1 per hour, the job should pay \$1.05.

Since jobs have a habit of changing from time to time along with new equipment, new products, and so on, they are usually reviewed at least twice a year. In this manner the company's evaluation will always reflect the current requirements.

ments of all jobs and the company attains a reputation for fairness when dealing with one of the most important questions of a man's job — his wage.

When base rates have been established, time study is used to determine how much each employee can be expected to produce to earn his rate. This operation not only establishes production rates, but provides the basis for incentive rates if incentives are to be installed.

Union Review

Company experts conduct the time studies and their findings are subject to review by union time study stewards trained in the same system.

In past years, time study developed an unsavory reputation. Experience indicates, however, that there is no reason for disagreement between management and unions on the entire question of production rates if the mystery of the time study is removed.

The solution is to guarantee that both parties understand what is involved. To do this a training course should be established for both management and union representatives. Training is aimed in two directions.

The first is for time study engineers of the company and time study stewards from the unions. They should be taught all of the techniques and procedures of time study and the development of time standards. When the training is completed, these men emerge as expert time study men.

The second is for foremen, superintendents, and executives of the company, and stewards and officers of the union. It is of a more general nature.

Returning to the drill press operation used earlier for an example, the first step would be to analyze existing methods to guarantee that equipment and facilities are correct and that hand and machine movements are right. If corrections or improvements are found possible, they would be instituted.

After this preliminary survey timing begins. The first step is already boiled down to this: "The operator picks up the piece of work and places it in position for drilling or tapping." The stop-watch is turned on and all movements are timed

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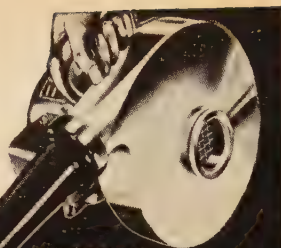
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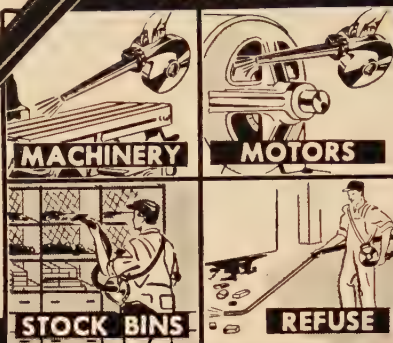
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precisely. Study after study is made with different operators, different materials, and different circumstances prevailing.

Figures of all studies are normalized and standards are set for all elements in the operation. The same is done for the second step, "pulls down lever and starts drilling phase," and for all other movements involved in the job.

Time study is factual. It involves reading a stop-watch and counting production. It should be quite difficult for two parties to disagree on either. There might be disagreement on the rating given a particular study, but even here experience has shown it is difficult to be very far apart if both sides are honest and if both are trained to recognize normal pace through scientific study.

Grievances Cut 80%

When such a program is completed, grievances arising from time standards are reduced as much as 80 per cent. Whatever grievances do arise are settled quite easily because methods have been set up for establishing indisputable facts.

Finally, there is an important by-product in labor relations. Experience has shown that such methods of objective fact-finding develop better understanding on both sides so far as the problems of each side are concerned. There develops an increasing awareness that most problems can be solved if the same principle is used. This is especially important in examining the overall strike picture since it is recognized that accumulated grievances are the major cause of strikes, slowdowns, weakened employee morale, and other expensive occasions for friction.

A company which utilizes time studies only to establish production rates and resolve labor disputes is not getting its money's worth, however, in spite of the tremendous value of these studies in that particular field. Time standards are management controls. For example, one use of time standards is in the pre-planning of processes, operations, and the layout of a plant. Time standards can be used effectively in planning and scheduling work. They provide a basis for determining in advance the manpower requirements, machine loads,

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and the flow of work through the shop. Production control without time standards is as ineffective and haphazard as an airplane without altimeter, gas gauge, compass, and other measuring instruments. Time standards can also be used for controlling costs of various types, including labor standards and variances, overhead, and non-productive labor.

One of the many examples of how joint action by management and union officials on establishing basic facts can stabilize labor relations and production is that of the Murray Corporation of America. The system described above was instituted by the corporation and Local Number 2 of the United Automobile Workers of America — CIO, with such success that a book on "Production Standards from Time Study Analysis" was published for employees.

Noting that "production disputes were a major problem," Lloyd T. Jones, local union president, reported that "production disputes are now practically non-existent."

The company reports, that the only major stoppage since the plan was installed occurred in 1947 and was directly due to union resistance to the Taft-Hartley Act, not to company union matters.

Clarence W. Avery, president of the Murray Corporation, has described the jointly written book as a symbol of "the widening of industrial science to become conscious of human factors involved in applying scientifically-determined facts."

Chicago Case

Here in Chicago a manufacturing association with a score of member companies found every member faced serious grievance and contract problems with a single international union. These disputes could have erupted into costly strikes. All companies agreed with the union to set up a management-union committee to establish uniform job evaluations throughout the industry. Members of the committee were trained and they conducted their studies jointly. Union and management shared the expense. Agreement has finally been reached and it will provide a basis for settling all wage and production grievances in the future and



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Hot Tax Money

(Continued from page 19)

theless, these are given a quick check for mathematical accuracy as they come in.

Generally, those below \$5,000 a year are given only a very scattered spot check. Here and there a form is picked out and sampled in an attempt to gauge the status of other forms in the group.

In 1950, however, the treasury will use a more intensive, group-pattern system. This will consist of random polling of a limited number of returns from each of a number of groupings according to locality, profession, etc. Even if these returns look OK, the person will be called in anyway and politely asked to substantiate the return. If this sample shows a tendency for that particular group to garble their returns, T-Men will concentrate a big-scale offensive on the group.

Under this new system, there is much more of a chance of the taxpayer getting a call from a treasury agent for verification of his return.

Informers Influential

Next to auditing, tips from informers are highly influential in exposing violators. These tips come from employes, "friends", neighbors, and even from relatives. Congress annually appropriates \$100,000 for the payment of rewards to such informers. Rewards are based on a percentage of the taxes, penalties, fines and forfeitures collected as a result of the information, but they may not exceed 10 per cent of

the amounts recovered. They are paid, however, only on the furnishing of specific information or evidence, not mere suspicions.

A fertile area probably exists here for blackmailers who have the goods on tax evaders but prefer dealing directly with the known violator.

Backlog of Tips

Backlog of tips in the treasury files are enormous. The 30,000 or so cases are gradually being worked down. Actually, a larger treasury staff is needed to process these properly. The Treasury has an excellent basis for seeking a larger staff, too, on its proof that for every single dollar spent in its tax enforcement effort, there is a return of \$20.

Recently, tax evasion investigators, assisted by an informer, turned up a construction laborer who, during four years of war work in an American territory, won over \$200,000 in off-hour gambling. The man had paid taxes only on his regular wages, and the investigation resulted in assessment of \$160,000 of additional taxes, interest and penalties against him. He also faces criminal prosecution.

More common, however, are cases like that of the eastern textile manufacturing concern and a group of individuals connected with it who were reported to be concealing sales and, on proof, were assessed \$1,250,000 for failure to pay taxes due. Another example is that of a theater chain operating in the South which was found to have evaded \$650,000 of taxes by omitting from its tax returns all profits from the ice-cream, pop corn and other concessions in the theaters.

\$300,000 Case

In another city, investigators found that the owner of some breweries which owed \$300,000 in taxes on black market profits was a man who went bankrupt early in the war but who was able to buy whole breweries a few years later by soliciting advance payments for beer orders during the beer shortage.

Heads are falling thick and fast as T-Men catch up with violators. A northern food and wine distributor, who juggled his books to evade taxes, has recently been assessed

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\$800,000. A midwestern beverage distributor was billed \$1,290,000 for taxes on black market profits.

An easterner who posed as a "tax expert" faces prosecution for preparing false refund claims for thousands of clients. One of the facts turned up in this investigation was that the man had tried to hide his connection with the returns by signing them with disappearing ink.

All of these cases — along with thousands more — also are liable to criminal prosecution.

T-Men Effective

While many deadbeats are located through informers, T-Men also are extremely effective in their own right. They are ever watchful for lavish spending by those who show relatively small incomes. Spending may be so sensationally out of line at gambling resorts, race tracks, and summer and winter resorts, by some of these people that the effect is like waving a large, red flag at the treasury.

Crimes often are detected in this manner. A printing equipment firm's employe, for example, recently was hitting the New York high spots in a tempo far out of line with his moderate salary. He also boasted a luxurious home, two cars and a yacht. Embezzlement was found to be the answer.

In another instance, a low-salaried cashier was thought by his townfolk to be a major executive in New York. At his Long Island estate he looked and acted like a millionaire. His free-handed spending popularized him, and he was elected mayor of the town. Systematic fraud over a period of years financed his big-time activities.

Extensive property ownership, inconsistent with reported income, has led many a government investigator to discover rank violations. Net worth of a person is carefully studied, and it is sometimes found that income reported and property acquired over a period of years can be explained only by planned tax evasion.

Some cases are exceptions to the rule, as in fortune-making through borrowed money, but capital gains, of course, must be reported in income tax returns, regardless of how the capital originally was obtained. A large profit may be made in sell-

ing a home bought before the real estate boom, but it is a serious income tax violation not to report this capital gain.

A few of the best tips to the treasury have come from large cash deals. Banks throughout the country have been warned by the treasury to report all large cash deals, for the rather obvious reason that those involved want no cancelled checks, receipts, or other evidence of the deal around.

One of the outstanding recent cases involved a prominent restaurant chain operator, now under a four-year prison sentence for tax evasion. The treasury's investigation of the affairs of this company originated with bank reports of large currency deposits. Claims for additional taxes and penalties in this case exceeded \$6,000,000.

In another instance the regular appearance of a messenger with large amounts of currency for deposit resulted in an income tax investigation of an automobile trailer manufacturer, with consequent assessment of \$2,200,000 against the firm and several individuals.

A glaringly obvious case was that of a man who turned in \$200,000 currency at a bank, requesting new money. Much of it was molded, some to the point of almost being rotten — an evident instance of buried money to evade paying taxes. Another man bought a piece of real estate for \$65,000 cash, which, fantastically enough, he brought in an orange crate!

Black Market Gains

Many of these fabulous piles of cash point to black market operations. Obtained originally through illegal methods, this hot money is kept out of the banks and financial institutions and goes through murky interchanges, sometimes from violator to violator.

There is no estimate of the hot money made in the great black markets of the war and immediate postwar period, but it is believed to have run into the billions. Black market deals in automobiles, liquor, drugs, sugar, poultry, meats and metals, sadly enough, were stimulated in some cases by honest business men who simply could not wait to get these products through the regular channels. Distasteful as



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CHICAGO 9

this situation was, these honest men did not dare to report these perpetrators, for fear of being cut off from future supply.

Ingenuity, which unfortunately is so often directed to crime, really went to town during the black market days. One of many cases was that of a man who set up a dummy candy company for which he bought about 4,000,000 pounds of rationed sugar. He resold the sugar at an enormous black market profit, and when federal agents caught up with him he was assessed over \$300,000 and branded for a jail sentence.

Primary guns of our government are trained on the big violators, but the petty violations, fully intentional, are estimated to total many millions. Very often there is a hairline difference between intent and accident, and certainly no single profession or trade can be singled out for particular investigation (except gambling, of course), but it is found that many present-day discrepancies are among the self-employed and in such occupations as taxi-drivers, bell-boys, waiters, and others who get much of their incomes in gratuities.

Government Procedure

Government procedure here is to spot-check a few, call them in and grill them closely, scandalize them through publicity if guilty, fine them, and scare others in the same occupations into giving Uncle Sam straight returns. The same procedure is being applied to the service trades.

Lately, there has been a crack-down on some automobile dealers who made large profits during the period when both new and used cars were in short supply. So many of these deals involve bargaining and cash transactions that they are difficult to check — and the treasury is sure it never hears of some profits.

The treasury has learned that independent stores sometimes are a fertile ground for finding tax violations. Many stores cannot afford formal accounting systems and may be violating on a large scale without realizing it. But some are outright violators, and Uncle Sam's men run up against a stone wall in trying to check them, because of the scarcity of records.

Such violators often are detected, however, by the request to explain their ownership of luxurious property, cars, cabin cruisers, etc., when only a small income is reported.

One of several glaring instances is that of a retail store which did a "secret" wholesale business in the basement. Profits were so enormous that the alert violator, to escape attention, spread bank deposits in more than 50 banks throughout the country.

Numerous professional people work on a semi-cash basis and frequently make honest omissions from the books. In many instances book-keeping is haphazard and government checkers often run into difficulty in obtaining adequate records.

Farmers are the hardest to check. They are tillers of the soil and not record-keeping men, and the great majority are fundamentally honest. However, a spot check in a middle western state was made by several teams of government men, who went from farm to farm, asking questions. The questions prodded rural memories in many instances to the extent that just this one venture brought Uncle Sam back taxes of \$5,000,000.

We all have a stake in the efficient collection of every tax properly due the government. As an aftermath of the war, we are faced with relatively heavy government expenditures for some years to come, even after exercising the utmost economy. To the extent that one citizen or one business is able to evade its proper share of the tax burden to meet these expenditures, the deficiency must be made up by other taxpayers.

The T-Men will be in there campaigning harder than ever this year. The better job they do the more the honest taxpayers' burden will be eased.

Two-Way Street

(Continued on page 126)

on training, and two such departments operate within the personnel division. One is responsible for developing engineering and sales personnel, and the other is concerned chiefly with supervisory and trade training. And both are tied in closely with the communications program.

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Training Department's Role

The trade and supervisory training department is even more directly concerned with the communications program. It assists with the indoctrination of new employees and is continuously engaged with improving the human relations skills of supervisors through regular conferences. This department also advises line management with respect to communications problems. And its facilities include a number of conference rooms of various sizes, together with all types of projection machines and chart-making equipment.

Supervisory conferences are led by line management personnel to the greatest possible extent, so that the training staff spends much of its time in organizing material and coaching supervisors in direct training and conference techniques. Evening courses in effective speaking are also sponsored for plant foremen and other supervisory people.

The subject matter at these conferences with supervisors is both practical and timely. There is a constant search for improvements that should be made. Prior to the negotiation of new agreements with the union that represents all of Carrier's factory employees, pertinent details are discussed in these supervisory sessions. And when the agreement is consummated, further discussions are scheduled promptly to make sure that any new provisions are thoroughly understood.

Visiting Foremen

Last summer a unique plan was adopted to enable plant foremen to become better acquainted with the performance of our products in the field. Several of these men were selected to go to various locations throughout the country to work with dealers, salesmen and service people. The first-hand information gathered during this experience has

proved to be worth a thousand written reports from the field, and is having a marked effect on our production and quality control efforts this year. Perhaps this is a bit outside the line of normal communications channels, but it is a very practical demonstration of the two-way street in actual operation.

A special effort is made to keep the two training departments well informed, as certainly they must be if their jobs are to be done effectively. At the same time, their staffs operate under special instructions to supplement, rather than seek to replace line management in keeping the flow of information going both ways.

What Are The Returns?

A very proper question might be asked at this point as to whether this fairly elaborate system pays off. We think it does. For aside from other manifest benefits of keeping supervisors and those who are supervised well informed, there is this outstanding fact. It has now been 22 months — nearly two years — since any complaint has reached the formal grievance stage at Carrier Corporation. More often than not, grievances are settled on the spot. And this is only possible because our foremen and supervisors know the score.

For the last several minutes, I have been discussing a more or less routine system, with particular emphasis on improving human relations. However, there is no reason whatsoever why these same channels cannot carry pertinent information on what might be called the economic facts of life.

Just the same, I have heard many business men ask rather plaintively during the last few years how they could present to their employes the truth to counteract the propaganda they receive outside the plant gates — that they realized something should be done, but that they could not find a method. My own feeling is that this is one hell of a weak excuse.

Now, I want to tell you about two rather special Carrier activities. But please understand that I don't claim they are cure-alls. All I maintain is that they provide at least some means of reaching the goals I mentioned at the beginning of my talk.

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known as the Carrier Institute of Business. This is an employee-managed activity which has been in existence since 1943. Each term of the Institute runs for 13 weeks. Attendance is limited to 220 individuals, and practically all of these are in the lower compensation brackets. Incidentally, two sessions of the Institute are run simultaneously, each being attended by 110 people. One of the courses is for beginners; the other is for those who have been graduated from it. Furthermore, although enrollment is entirely voluntary, the courses are almost invariably over-subscribed.

Meet On Own Time

These men and women meet together once a week on their own time and listen to a talk on some important economic or social subject. The speakers are Carrier executives, together with a limited number of important people from the outside — men like Raymond Moley, George Sokolsky, Leo Wolman and so on.

After the speech of the evening, the students break up into small discussion groups, each one presided over by a junior executive. No "brass", mind you. During these sessions, the views of the key speaker are literally taken apart. Ideas are freely exchanged. Criticisms

are made without restraint. And the high points of the evening's discussions are passed on to top management with no names mentioned.

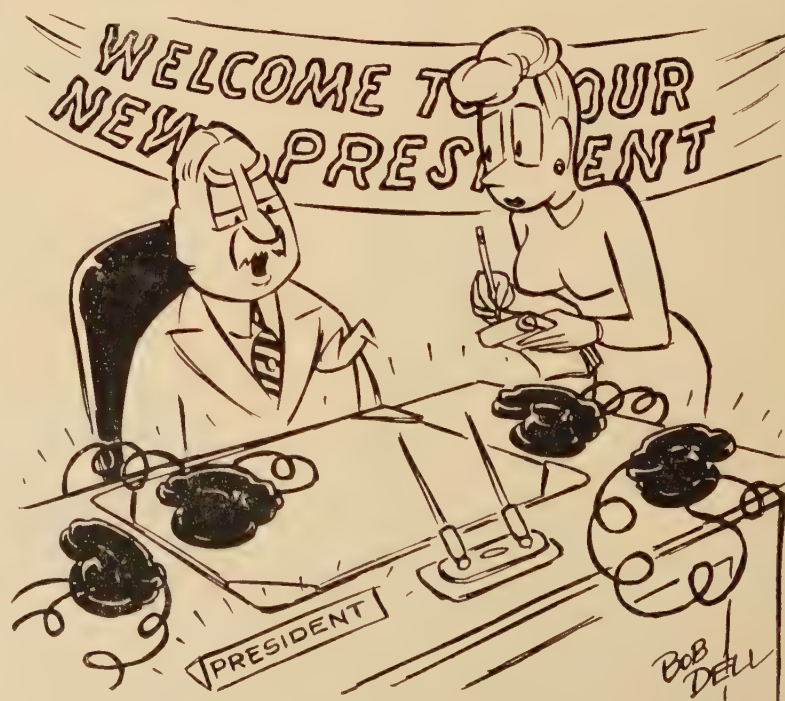
Educational Results

The result of this operation is that the men and women who work for Carrier learn a great deal about the American system, both economic and social, and perhaps even political. Furthermore, they get to know an awful lot about what makes our company tick. Most important of all, they have an opportunity to get their views across to management. And so, management obtains a better understanding of employee's problems and attitudes.

The Institute is a very real two-way street. Information — and even learning — flows not only from the top to the bottom, but from the bottom to the top. And I say to you without the slightest reservation — this undertaking has been of greater value to management than to the students.

However, I do not wish to minimize the importance of the Institute to Carrier's employees and to the basic cause that we are discussing here today. Here are just a few of the results that can be measured with some accuracy.

At the beginning of certain ses-



"What kind of a desk is that to set before an executive. Get me some phones!"

sions, the Institute students are asked to write "True" or "False" after a number of statements. Then at the end, the same thing is done, using statements that reflect the same issues.

Here is one of the statements: "The average American corporation ought to put more money into wages for employes and less into advertising." At the start of the course, 40 per cent of the students said this was true. Thirteen weeks later, the figure was 13 per cent.

And here is a second test statement: "The bulk of the money spent by the federal government comes from duties on imports and similar sources." When the course opened, almost half of the students believed this to be true. But at the end, no one thought so.

Still another statement read: "The government has an obligation to see that no one goes jobless, no matter what the cost to the taxpayer." Back in 1944, the answers were 33 per cent "true" at the start and 24 per cent at the finish of the course. Now this very same statement was made at the most recent session of the Institute, and the replies added up to 20 per cent "true" in the beginning, and only 15 per cent "true" at the close.

Progress Measured

Certainly I am not basing a judgment on this one question, but there is other corroborative evidence to support the conclusion that Carrier employes on the average are better informed now than in 1944. However, those who hold views we might consider to be "false" are now a bit harder to shake loose from these convictions.

Another interesting point is this. More than half of the Carrier employes who have taken the Institute courses have subsequently been promoted.

Now then, just two more comments about the Institute.

The men and women of Carrier who take these courses are recognized for having done something worthwhile. Each one receives a diploma which compares favorably in appearance at least with that presented by a college. And at the graduation exercises, someone outstanding makes a speech of the evening. Two recent commencement addresses were made by Dr.

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Next is this, and it deserves great emphasis. The very top people of Carrier work at making the Institute successful. And I assure you it has been.

The "Cabinet"

Before leaving the subject of the Carrier Institute, I'd like to emphasize still another point. Whenever any of us talk with our employees about a problem, we try very hard to present the message in terms that are both interesting and understandable.

The other Carrier project I want to review is the cabinet. This is a group of about 100 of our management people, including officers, department heads and other major supervisors, who meet each month for two purposes. First, they gather together to listen to exhaustive reports of what happened in our business during the preceding month and to review current problems and plans. Incidentally, these men get exactly the same data that are given to our directors, and the monthly sessions of the cabinet occur immediately after each board meeting.

Second, an opportunity is afforded for questions and answers and discussion. And I assure you that

the questions asked are invariably searching and sometimes even embarrassing. For no holds are barred. We lay it on the line to each other. And the subjects covered range from current economic trends to trouble encountered with some specific product, and from government fiscal policy to plans for building a new plant. I personally preside at each Cabinet meeting, and have never missed a single session.

Obviously, this is another educational undertaking which ties in with our system of line communication and here again, the flow of information is not in one direction. Actually more flows up, so to speak, than flows down.

Program Is Dynamic

It might be well to stress the point here that we have no intention of remaining static in our communications program. Constant evaluation and improvement are essential to maintain effectiveness. For example, details are now being worked out for an enlargement of this cabinet program. While final decisions have yet to be made, it is entirely possible that this will take the form of expanding cabinet participation once each quarter from 100 supervisory employees to more than 400.

Now for just a few minutes, I would like to expand a little bit on



"...and after that I'm going to have dessert and another cup of coffee!"

my earlier statement that the job of combating the trend toward collectivism is not only a personal and a company job, but also a community job. Perhaps what I am about to say is somewhat outside the field of employer-employee communications. However, we must surely admit that community leadership simply must be provided, at least to some extent, by industry.

The story which I am about to tell has to do with Carrier's home city of Syracuse, New York which is a rather substantial manufacturing center with a population of about 250,000.

One evening back in 1946, eight of us, mostly company presidents, were sitting around a dinner table talking about the dangers of ever-increasing big government. And out of the discussion grew an idea for the establishment of a completely local organization which would devote itself to the perpetuation of the American free enterprise system.


Year Spent On Principles

Believe it or not, these eight individuals worked for almost a year in developing a statement of principles that was acceptable to them. The next move was to have this statement reviewed carefully and criticized by a group of younger men. As a matter of fact, not many changes were made. But we did obtain the benefit of the slant of youth and the statement was better after the youngsters got through with it.

Finally, in April of 1947, The Citizens Foundation, Inc. was officially launched as a non-profit, non-partisan and non-sectarian organization. And I would say that its outstanding feature is this — a combining of the point of view and the enthusiasm of young men with the experience of those of us who are older.

Today, the Foundation has 74 regular members, under 45 years of age, and in addition 57 senior members. At the outset, a salaried director was appointed. Later a paid assistant was added. And the Foundation occupies a suite of offices in a downtown building where there are files and a reference library which would be hard to duplicate.

Among the Foundation members are Catholics, Jews and Protestants.



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And these include manufacturers, merchants, lawyers, bankers, men who have chosen politics as a profession, teachers and members of the clergy.

Each and every one of these men has subscribed to the hard-won statement of principles that I mentioned a moment ago. I wish I had time to read all of this to you. But I must content myself with only the following — and I am now quoting:

"We believe in God.

"We believe in Freedom.

"By freedom, we mean that concept of a free society in which each person has the greatest possible opportunity to develop as an individual.

"We believe that freedom cannot exist separately from responsibility.

"By responsibility, we mean the duty of each person in a free society to accept and fulfill to himself and others those obligations inherently his by virtue of his own capacity. Freedom of religion, of speech and of opportunity require the acceptance by each citizen of individual responsibilities — to his God, to his country, to his family and to his fellow men.

"We believe that such freedom and responsibility are the basis of American democracy — established in this nation by the Constitution and the Bill of Rights — and the only design for living that encourages the full development, under

God, of strong, self-reliant, intelligent individuals."

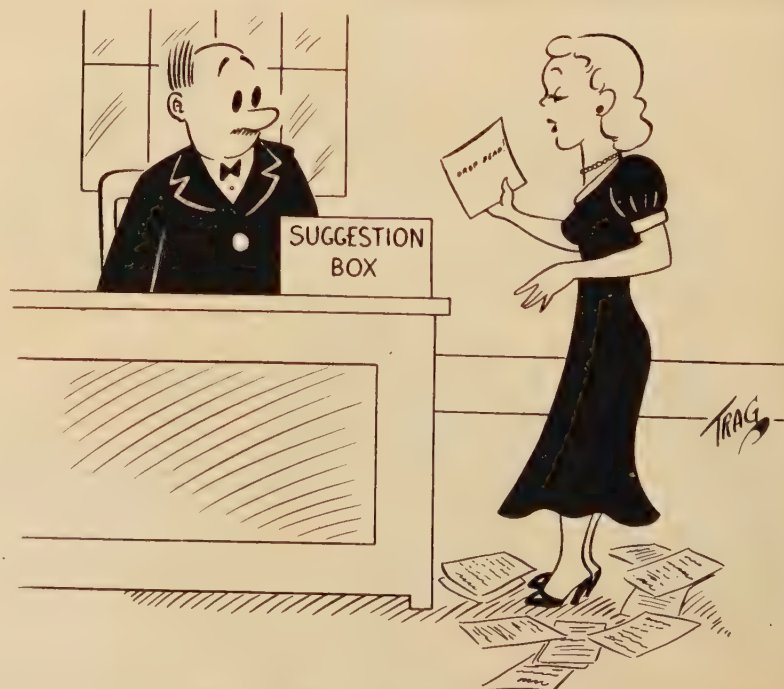
There is nothing in the entire statement that suggests any approval of "something for nothing."

For almost three years now, The Citizens Foundation has been an active force for good in our community. Essentially, its efforts have been educational. And if we have not done anything else, we have added to the understanding of 131 leading Syracuse citizens — both young and old — the members of the Foundation themselves.

However, we have done far more than this. And once more, I wish I had time to report all of our activities. However, all I can do today is to present the barest outline.

Speakers and Speeches

The Foundation furnishes speech-writing facilities and maintains a first-rate speakers bureau. It used to be that we had great difficulty in finding men who could present our side of the story. But now the situation is quite different. The Foundation has sponsored a series of 13 panel discussions spread over as many weeks, having to do with "What Everyone Should Know About Business". This course was put on by highly skilled professionals and was attended, week after week, by more than 700 people. And here I would emphasize that the audience was a good cross-section



"...and this one says 'Drop dead!'"

ion of Syracuse. It included hourly workers and company presidents, labor leaders and housewives, lawyers and merchants, ministers and college professors.

Another undertaking of the Foundation was a series of social justice forums in which leading Catholic, Jewish and Protestant clergymen were asked to discuss frankly their views on such matters as the profit system, pension plans and so on. And here again we had large and representative audiences. Then too, the Foundation is sponsoring an in-plant visitation program for school teachers. Now, I realize that this isn't a new idea. However, somebody always has to see that a job of this sort is done. And in our case, The Citizens Foundation accepted the responsibility.

A Working Program

But I have time for only two more points. First, each and every member of the Foundation is at work. This means that they serve on committees, make speeches, participate in discussion groups, conduct a public relations program and, perhaps most important of all, they are inspiring effective intra-company programs. Second, the success of the Foundation has been due in large part to wholehearted support from the leading business men of our community. For example, I am a senior member. But much more important is that six young men of the Carrier organization are regular members. And I have made clear to each of these that active participation in the affairs of the Foundation will be good not only for the community but for them and for Carrier. Furthermore, I have told them that the good work which they are doing as members of the Foundation will be taken into account as we judge their regular progress with our company.

Now, I'd like to raise the \$64 question — How effective have our efforts at Carrier been?

I don't know for sure. However, here is still another fact that seems quite significant. Carrier Corporation has never had any so-called labor trouble — not a single work stoppage. And I believe this is due chiefly to two things. First, utter frankness on the part of management. Second, a wholehearted at-

tempt by management to educate employes while, at the same time, giving employes, without limitation, an opportunity to educate management.

As for the larger field — that of preserving freedom in America, all I claim is that we are trying hard and have, at least, made some progress in our own backyard. And I believe that if this problem is tackled, as it should be, in companies and in communities all over the land, a tremendous force will be marshalled and that force will vanquish those who are now deceiving and misleading and bemocking our people. Freedom cannot be kept For Free!

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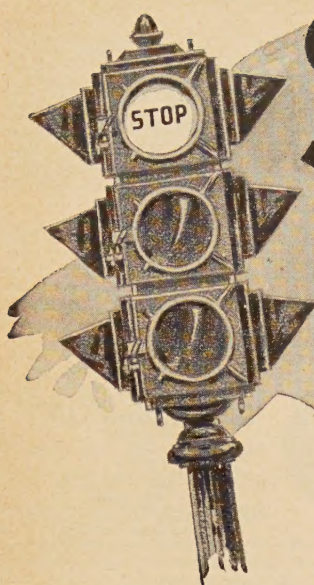
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"Well," asked the clergyman, "can you light the fire and bring early morning tea at seven?"

"I—I think I could," replied the young man, puzzled.

"Can you work in the garden?" continued the clergyman. "I mean, can you mow the lawn and prune trees and cultivate the soil?"

"Well—er—yea, I think so," stammered the youth.

"Can you polish silver, look after a dog, and be generally useful about the house?"

The young man nodded.

"And drive a car, and wash the windows, and —"

"I say, sir," interrupted the young man hoarsely, "I came here to consult you about getting married. If I have to do all that, it's off!"

A hillbilly was haled into court for fighting.

"Tell your story," said the judge.

"Well, judge," said the hillbilly, "I was in a phone booth talkin' to my gal, and this guy wants to use the phone, so he opens the door, grabs me by the neck and tosses me out on my ear."

"Then you got angry?" asked the judge.

"Wal, a little," said the hillbilly. "But I didn't get real mad 'til he grabbed my gal and threw her out, too."

"I believe," said the bride, "in a perfect understanding between a man and wife. I intend to make my husband understand that he no longer can do whatever he pleases."

The small daughter watched her mother soberly while she marked her ballot at the polls, then remarked: "You voted for the man you loved best, didn't you, Mother?"

"Gracious, child!" exclaimed the mother, "why did you ask that?"

"Because you put a kiss by his name."

He was about 9, and extremely fond of the neighbor's dog, who reciprocated the affection. The other evening they were romping on the floor when the dog stood up, put its paws on the boy's shoulders, and plastered him with wet affection.

To the mother's horror, the boy planted a kiss right on the dog's nose.

"Aw, what you worrin' about?" he said when she remonstrated. "It won't hurt him. I got over my cold a week ago."

Tommy came to school loaded with bubble gum which he passed out to classmates and a surprised teacher.

"I just became a brother last night," he explained.

Professor: "Name two ancient sports."
Student: "Anthony and Cleopatra."

"I've got a pretty distasteful job before me," remarked the genealogist. "Mrs. Newrich employed me to look up her family tree, and I've got to inform her that one of her relatives was electrocuted!"

"Why worry about that?" said his friend. "Just write that the man in question occupied the chair of applied electricity at one of our public institutions."

Traveler (to another, on train): "I just got out of prison this morning. It's going to be tough, facing old friends."

The other: "I know just how you feel. I'm just getting home from Congress."

Passerby (to picket carrying a blank sign): "What's the idea?"

Picket: "I'm looking for a sponsor."

Man (to panhandler): "Why don't you go to the Settlement House and get a free meal?"

Panhandler: "Golly, don't you ever like to eat out?"

Drunk: "Ho! Lady, you got two very beautiful legs."

Girl (snapping): "How would you know?"

Drunk (brightly): "I counted 'em."

Motorist: "I'm sorry I ran over your hen. Would \$2 pay for her?"

Farmer: "Better make it four. I've got a rooster that was mighty fond of that hen and the shock might kill him."

Time: The stuff between paydays.

Magistrate: "But why did you break into this dress shop four nights running?"

Defendant: "I got a new dress for my wife and she made me go back and change it three times."

Sweet young thing (on first fishing trip): "How much did that red and green thing cost?"

Boyfriend: "You mean the float? Oh, about a dime, I guess."

SYT: "Then that's what I owe you—mine just sank."

First Mother: "Are you bothered much by your children telling fibs?"

Second Mother: "Not so much as by their telling the truth at very inappropriate times."

